

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

For Quarter 4 2015, which spanned from October 1, 2015 to December 31, 2015, there were 8,728 incidents reported to the Indiana Trauma Registry at the Indiana State Department of Health. There were 96 hospitals that reported data, of which 9 were level I or II trauma centers, 7 were level III trauma centers and 80 were non-trauma centers. There were 7 hospitals that either started to report again or were new to reporting during this quarter compared to the previous quarter, while 8 hospitals dropped off from reporting. A map of the state with the reporting hospitals can be found on page 59. Trauma centers represented 56% of the data. There were 3,301 incidents reported for October, 2,841 reported for November, and 2,586 incidents reported for December.

The content of this report has changed due to suggestions and additions requested by the Indiana State Trauma Care Committee at the April 14, 2015 meeting. Explanations of the changes requested and adapted from the ISTCC meeting can be found on page 21.

Some general reminders include that the blue columns represent an Indiana average, red columns represent level I and II trauma centers, green columns represent level III trauma centers and orange non-trauma centers. If a single percent is listed above a group of bars, the percent listed represents the average for Indiana. If a number is listed above a group of bars, it represents the count for Indiana. The category 'All Transfers' denotes the patient group where ED Disposition = Transferred to Another Hospital. **The category 'Linked Transfers' represents the patient group for whom the initial hospital and final hospital information could be linked.**

The E-codes used in this report follow the ICD-9 CDC matrix of external cause of injury.

Definitions:

Direct Admit: Patient is admitted directly to the hospital and does not spend time in Emergency Department. The ED Length of Stay should reflect a direct admittance.

External Cause of Injury: ICD-9-CM codes that are used to describe the mechanism or external factor that caused the injury event.

Trauma Type: The classification of the force applied to the body. Trauma type categories include blunt, penetrating, thermal, and other trauma.

Injury Severity Score: An anatomical scoring system defined as the sum of the three highest squared maximum Abbreviated Injury Scale (AIS) values to account for multiple injuries in the six body regions.

Acronyms:

E-code: External Cause of Injury	MVC: Motor Vehicle Collision
ED: Emergency Department	OR: Operating Room
ICU: Intensive Care Unit	Ps: Probability of Survival
ISS: Injury Severity Score	CAHs: Critical Access Hospital
LOS: Length of Stay	Level I, II and III: Verified and In Process Trauma Centers
NTC: Non-trauma Center	

Calculations:

$Ps = 1/(1+e^{-b})$ where $b=b_0+b1(RTS) + b2(ISS) + b3(Age\ Index)$

Total GCS = Verbal GCS + Motor GCS + Eye GCS

$RTS = 0.94 * GCS + 0.73 * SBP + 0.29 * RR$

$ISS = (AIS)^2 + (AIS)^2 + (AIS)^2$



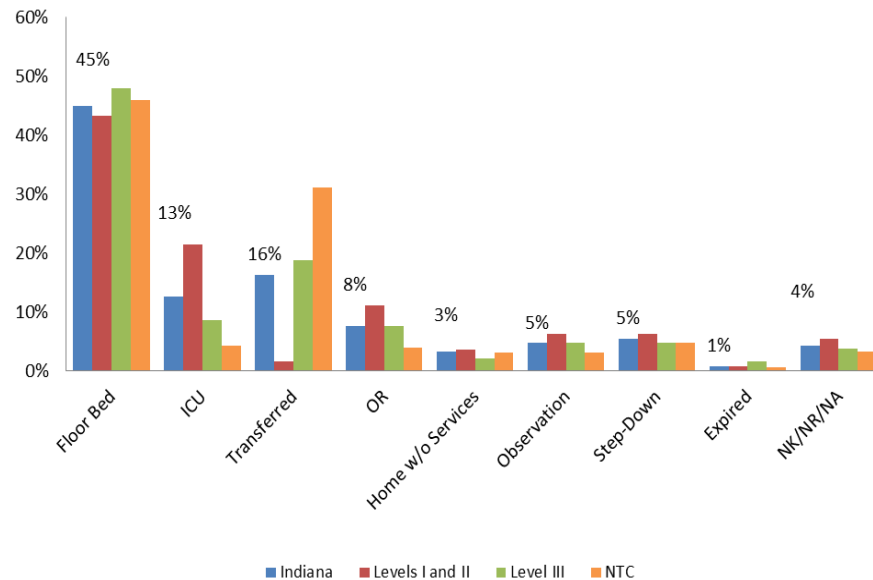
Indiana State
Department of Health
Trauma and Injury Prevention

Indiana Trauma Registry

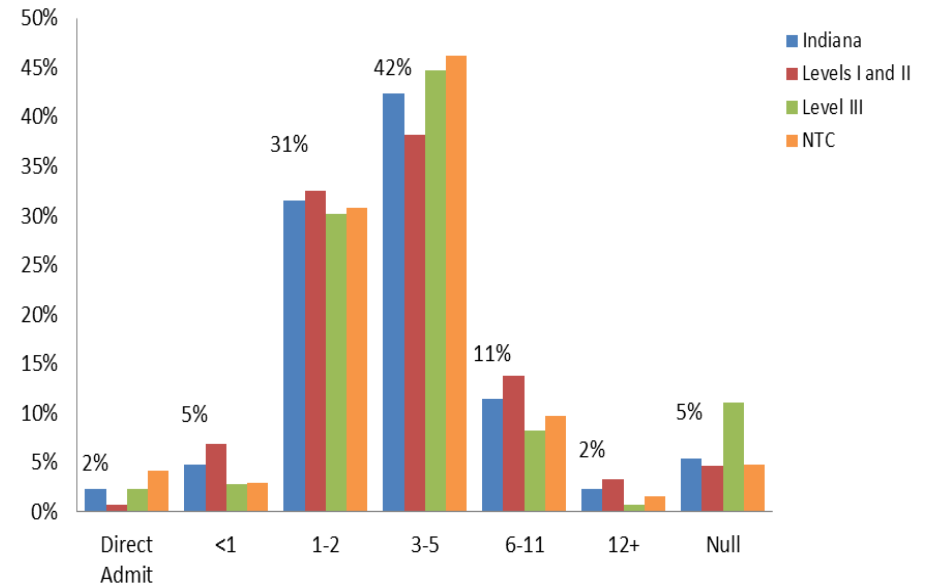
Statewide Quarter 4 Data Report October 1, 2015—December 31, 2015 8,728 Incidents

96 Total Hospitals Reporting
 Level I and II: 9 facilities 45.8% of data
 Level III: 7 facilities 10.2% of data
 (Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition by Percentage



ED Length of Stay (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

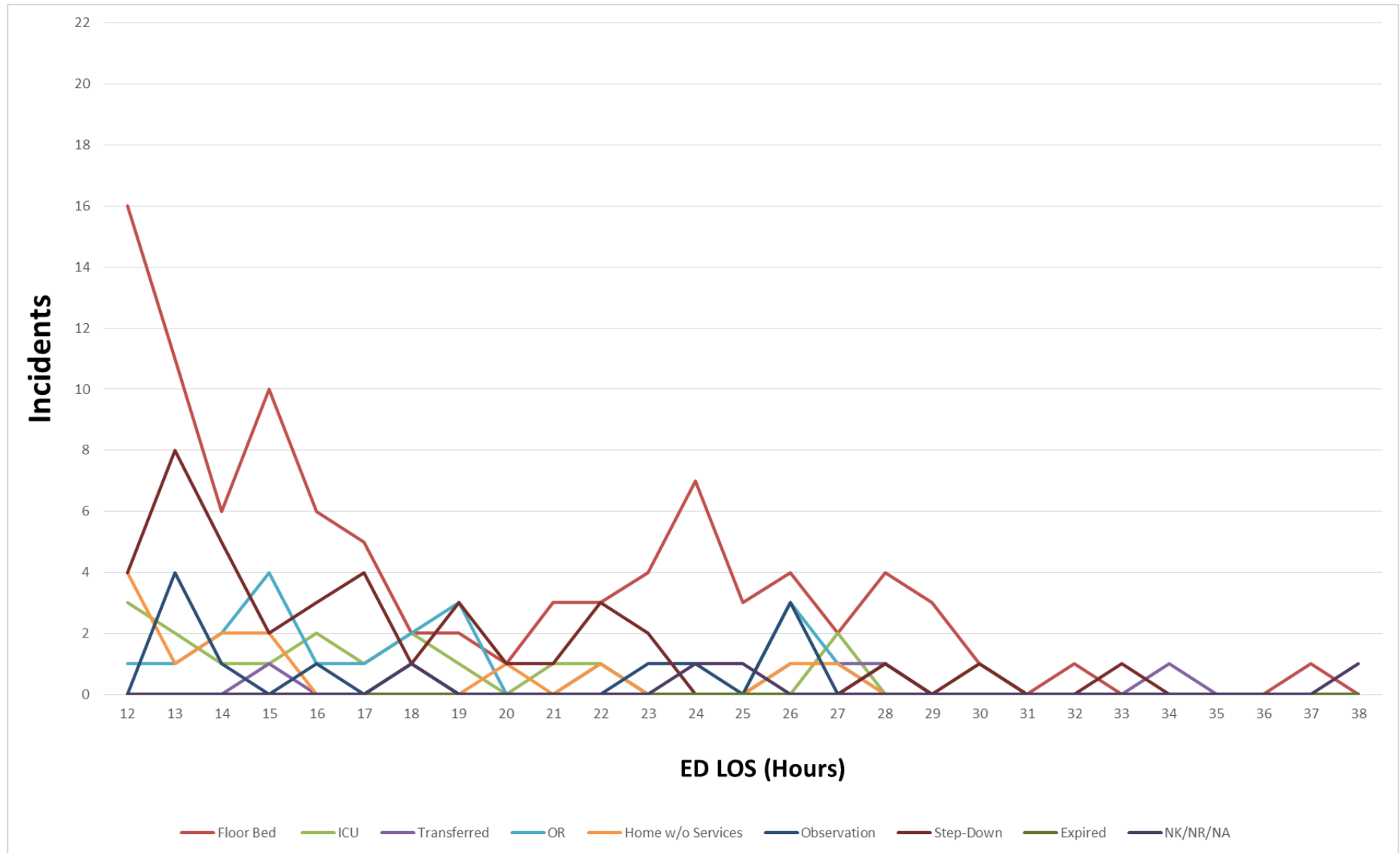
8,728 Incidents

96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data



N=197

*No cases expired

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

ED LOS > 12 Hours, N=197

Facilities	133 Level I and II 6 Level III 58 Non-trauma Centers	ISS	98 (1-8 cat); 70 (9-15 cat); 18 (16-24); 7 (25-44); 4 (No ISS)
Average Distance from Scene to Facility	20.8 Miles	GCS Motor	1 (1 cat); 1 (4 cat); 5 (5 cat); 155 (6 cat); 35 (unknown)
Transport Type	141 Ambulance; 7 Helicopter, 41 Private Vehicle/Walk-In; 8 Unknown	RTS—Systolic	4 (3-4)
Trauma Type	142 Blunt; 12 Penetrating; 1 Burn; 10 Other; 32 Unknown	RTS—GCS Scale	3.9 (0-4)
Cause of Injury	62 Fall; 50 MVC; 17 Struck; 5 Fire-arm; 14 Transport; 7 Cut/Pierce; 1 Bicyclist; 1 Burn; 2 Bite/Sting; 1 Bicyclist; 38 Unknown	RTS—Resp. Scale	3 (3-4)
Signs of Life	177 Yes; 1 No; 19 Unknown	RTS	7.5 (3—7.8)
Age	55.1 Years (0.5-93 Years)	B Value	3.97 (0.4-5.6)
Gender	79 Female; 118 Male	Ps	0.97 (0.6—1)
Interfacility Transfer	43 Yes; 154 No	Resp. Assistance	1 Yes; 55 No; 141 Unknown
Region	35 North; 112 Central; 27 South; 23 Unknown	ED LOS	17.9 (12-34)
		ED Disposition	1 AMA; 87 Floor; 1 Home w/ Services; 13 Home w/o Services; 16 ICU; 3 NA; 13 Observation; 19 OR; 38 Telemetry; 5 Transferred; 1 Unknown

-Region was created from injury zip code. Missing = no injury zip or injury zip from out of state.

-Numbers represent counts per category or mean with minimum and maximum in parentheses.

-No signs of life is defined as having none of the following: organized EKG activity, papillary responses, spontaneous respiratory attempts or movement, and unassisted blood pressure. This usually implies the patient was brought to the ED with CPR in progress (2015 Trauma Registry Data Dictionary, page 185).

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

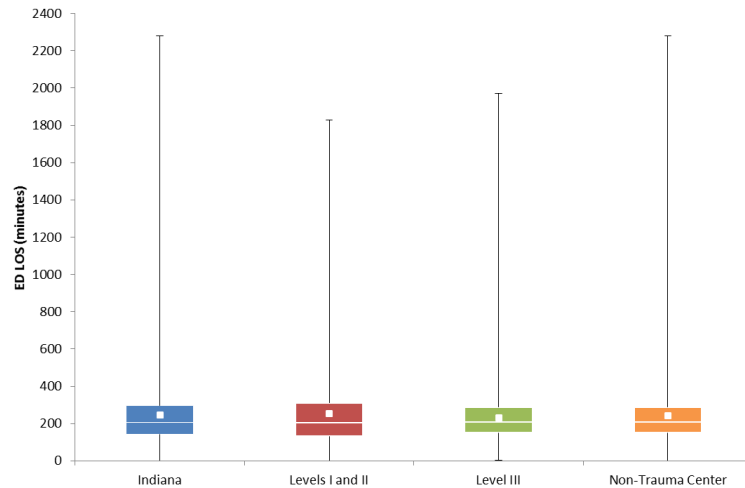
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

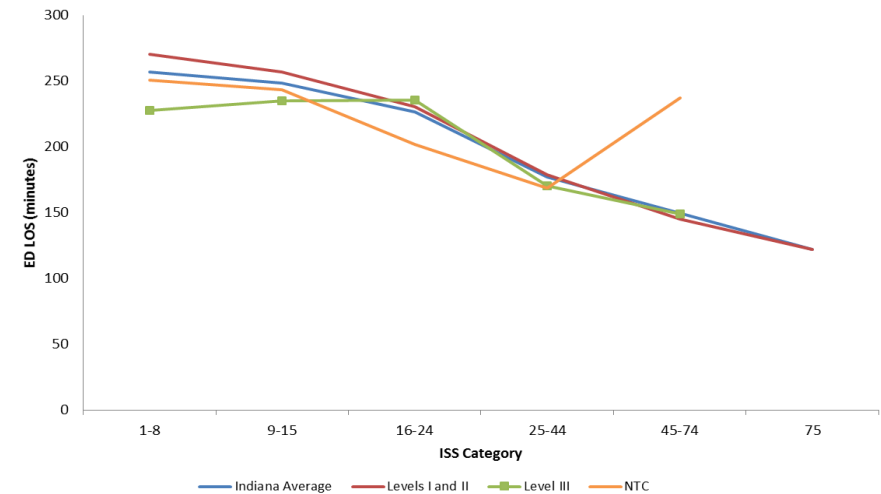
Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED LOS (Minutes) - All Patients



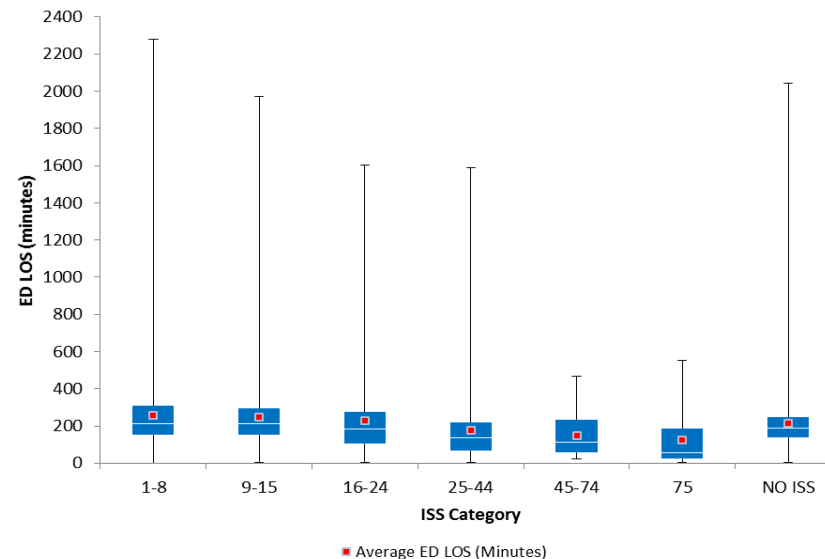
ED LOS (Minutes) by ISS



A table with all the values for ED LOS is found on page 56.

ED LOS (Minutes) by ISS

Note for EDLOS by ISS, there were 11 cases with ISS of 75; none were at non-trauma centers.



A table with values for ED LOS by ISS may be found on page 57.

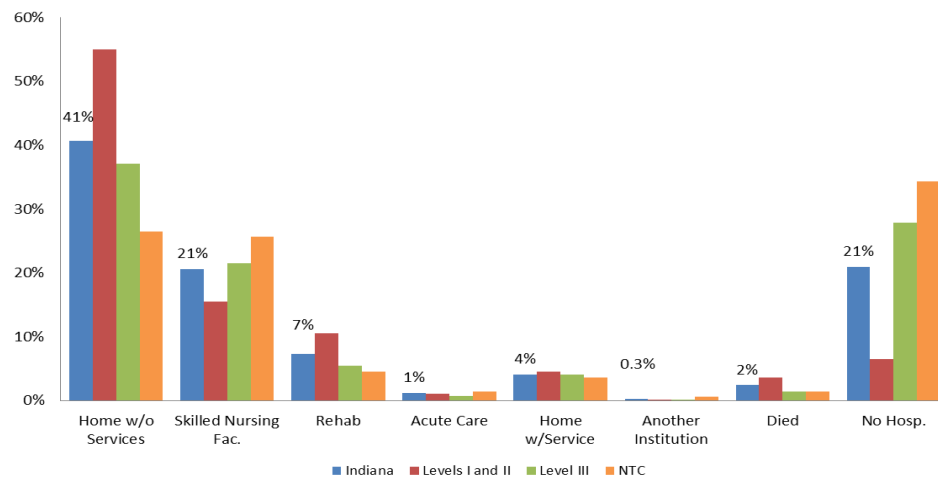
Indiana Trauma Registry

Statewide Quarter 4 Data Report October 1, 2015—December 31, 2015 8,728 Incidents

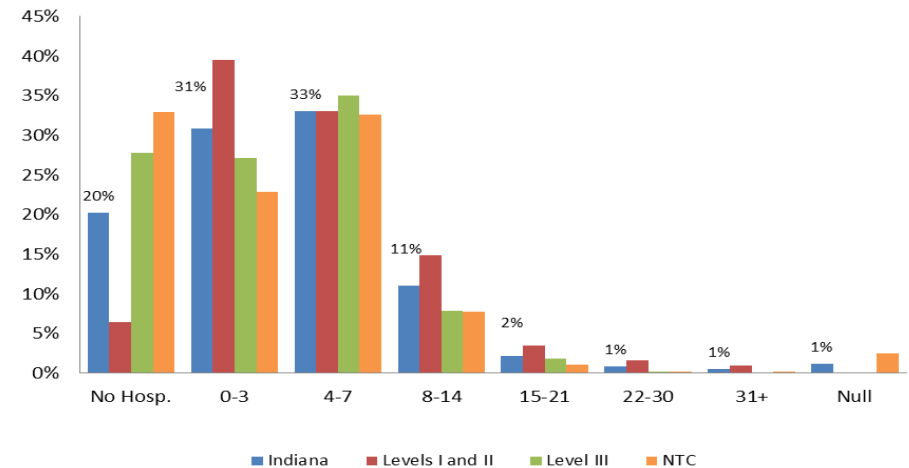
96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

Hospital Disposition



Hospital Length of Stay (days)



*There are new categories for the Hospital Disposition for the 2014 Data Dictionary
<1%: null, psych., long term care hospital, AMA, hospice and intermediate care.

Indiana Trauma Registry

Statewide Quarter 4 Data Report

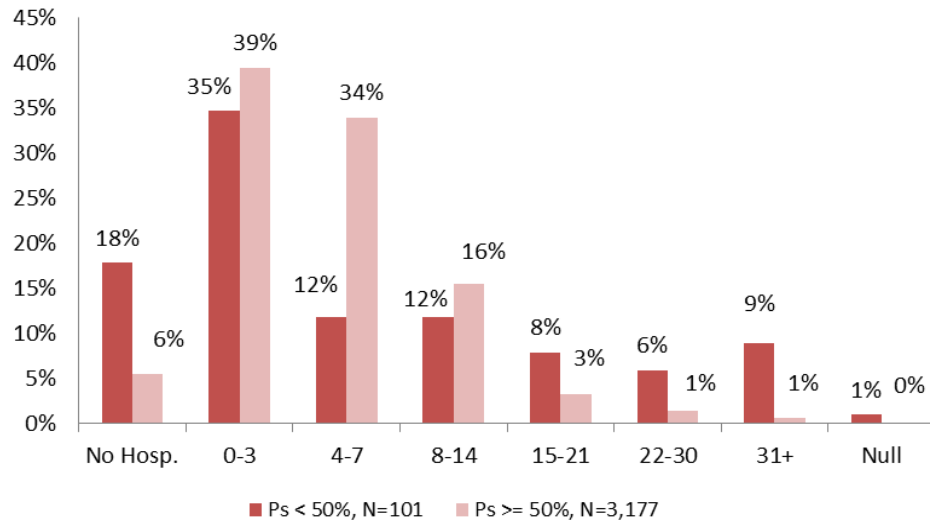
October 1, 2015—December 31, 2015

8,728 Incidents

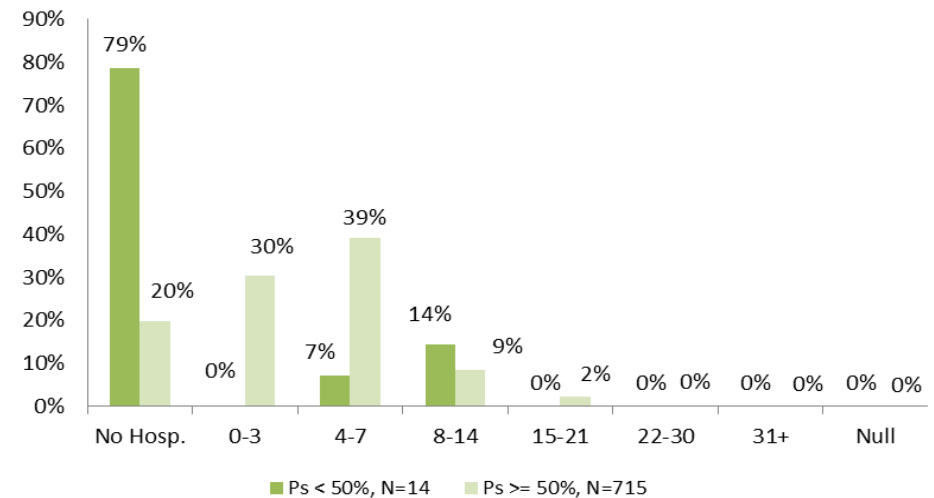
96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

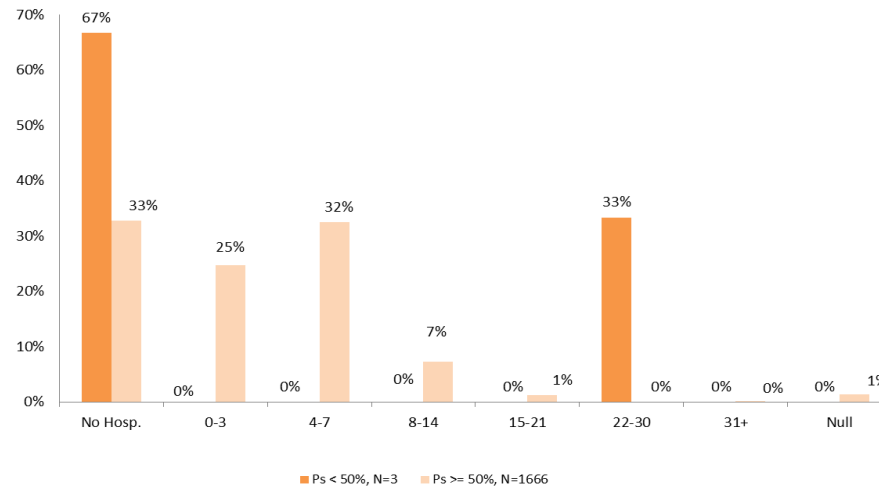
Hospital LOS (days) by Ps Levels I and II



Hospital LOS (days) by Ps Level III



Hospital LOS (days) by Ps Non-Trauma Centers



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

ED Disposition = Expired for Ps \geq 50%, N=7

Facilities	1 Non-Trauma Centers 6 Trauma Centers	ISS	4 (1-8 cat.); 1 (9-15 cat.); 2 (25-44)
Average Distance from Scene to Facility*	14.5 Miles	GCS Motor	4 (1 cat); 1 (5 cat); 1 (6 cat); 1 Unknown
Transport Type	6 Ambulance; 1 Helicopter	RTS—Systolic	3.7 (2-4)
Trauma Type	6 Blunt; 1 Penetrating	RTS—GCS Scale	2 (0-4)
Cause of Injury	2 Fall; 3 MVC; 1 Firearm; 1 Transport	RTS—Resp. Scale	2.4 (0-4)
Signs of Life	3 Yes; 4 No	RTS	4.5 (2.3-7.8)
Age	35.4 Years (10—73 Years)	B Value	2 (1-3.8)
Gender	2 Female; 5 Male	Ps	0.9 (0.7—0.98)
Interfacility Transfer	1 Yes; 6 No	Resp. Assistance	1 Yes; 1 No; 5 Unknown
Region	4 North; 1 Central; 1 Unknown	ED LOS	1.41 hours (0.2-2.2 hours)

-Region was created from injury zip code. Missing = no injury zip or injury zip from out of state.

-Numbers represent counts per category or mean with minimum and maximum in parentheses.

-No signs of life is defined as having none of the following: organized EKG activity, papillary responses, spontaneous respiratory attempts or movement, and unassisted blood pressure. This usually implies the patient was brought to the ED with CPR in progress (2015 Trauma Registry Data Dictionary, page 185).

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

ED Dispo ≠ Expired, Hospital Dispo = Expired for Ps ≥ 50%, N=79, Trauma Centers

Interfacility Transfer	27 Yes		Interfacility Transfer	52 No
Average Distance from Scene to Facility	38.8 Miles		Average Distance from Scene to Facility	19.1 Miles
Transport Type	16 Ambulance; 7 Helicopter; 4 Unknown		Transport Type	33 Ambulance; 11 Helicopter; 1 Private; 7 Unknown
Trauma Type	26 Blunt; 1 Penetrating		Trauma Type	48 Blunt; 4 Penetrating
Cause of Injury	23 Fall; 2 MVC; 1 Cut/Pierce; 1 Transport		Cause of Injury	26 Fall; 19 MVC; 1 Struck; 4 Firearm; 2 Transport
Signs of Life	17 Yes; 10 Unknown		Signs of Life	37 Yes; 15 Unknown
Age	70.2 Years (1-95 Years)		Age	64.6 Years (9-102 Years)
Gender	13 Female; 14 Male		Gender	21 Female; 31 Male
Region	6 North; 14 Central; 4 South; 3 NK		Region	10 North; 26 Central; 9 South; 7 NK
ISS	4 (1-8); 12 (9-15); 2 16-24); 9 (25-44)		ISS	3 (1-8); 17 (9-15); 11 (16-24); 20 (25-44); 1 (45-74)
GCS Motor	7 (1 cat); 1 (2 cat); 2 (4 cat); 1 (5 cat); 17 (6 cat); 1 (unknown)		GCS Motor	6 (1 cat); 2 (3 cat); 5 (4 cat); 5 (5 cat); 34 (6 cat)
RTS—Systolic	4 (3-4)		RTS—Systolic	3.8 (2-4)
RTS—GCS Scale	3.4 (0-4)		RTS—GCS Scale	3.2 (0-4)
RTS—Resp. Scale	3.1 (3-4)		RTS—Resp. Scale	3 (2-4)
RTS	7 (3.8-7.8)		RTS	6.7 (3.8-7.6)
Ps	0.8 (0.6– .995)		Ps	0.8 (0.5– .995)
Resp. Assistance*	2 Yes; 12 No; 13 Unknown		Resp. Assistance	8 Yes; 24 No; 20 Unknown
ED LOS	3.1 Hours (0.1—7.5 Hours)		ED LOS	3.5 Hours (0.2—21.4 Hours)

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Dispo ≠ Expired, Hospital Dispo = Expired for Ps ≥ 50%, N=19, Non-trauma Centers

Interfacility Transfer	1 Yes	Interfacility Transfer	18 No
Average Distance from Scene to Facility	24.4 Miles	Average Distance from Scene to Facility	8.2 Miles
Transport Type	1 Not Known	Transport Type	14 Ambulance; 1 Private; 3 Unknown
Trauma Type	1 Blunt	Trauma Type	18 Blunt
Cause of Injury	1 Fall	Cause of Injury	18 Fall
Signs of Life	1 Yes;	Signs of Life	17 Yes; 1 Unknown
Age	69 Years	Age	79 (49-100 Years)
Gender		Gender	10 Female; 8 Male
Region		Region	5 North; 9 Central; 1 South; 3 Unknown
ISS	1 (9-15)	ISS	3 (1-8); 11 (9-15); 1 (16-24); 2 (25-44); 1 Unknown
GCS Motor	1 (6 cat)	GCS Motor	2 (1 cat); 1 (3 cat); 2 (4 cat); 1 (5 cat); 9 (6 cat); 3 Unknown
RTS—Systolic	4	RTS—Systolic	3.9 (3-4)
RTS—GCS Scale	4	RTS—GCS Scale	3.5 (0-4)
RTS—Resp. Scale	3	RTS—Resp. Scale	3 (3)
RTS	7.6	RTS	7 (3.8-7.6)
Ps	0.96	Ps	0.9 (0.5-0.98)
Resp. Assistance	1 No	Resp. Assistance	8 No; 10 Unknown
ED LOS	1 Unknown	ED LOS	3.2 (0.6-6.6)

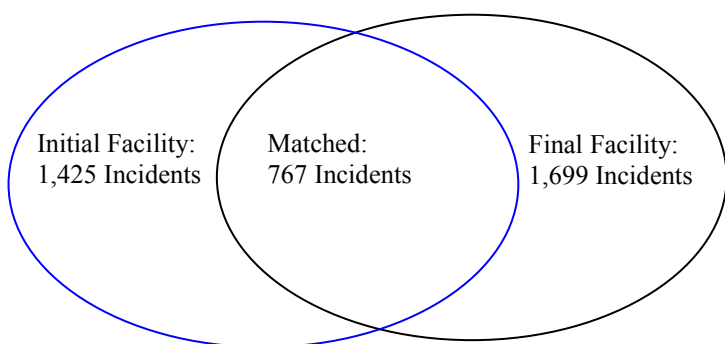
Indiana Trauma Registry

Statewide Quarter 4 Data Report October 1, 2015—December 31, 2015 8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

For Quarter 4, 2015, of the 8,728 incidents reported to the Indiana Trauma Registry, 1,425 cases that had an ED Disposition of “Transferred to another acute care facility” at the initial facility or that had the Inter-Facility Transfer equal to “Yes” at the Trauma Center. Of those transferred, 767 cases were probabilistically matched. The linked cases make up 25% of the Q4 2015 data. All public health preparedness districts are represented. The diagram below illustrates the overlap between the transfers reported from the initial facility and from the final facility that can be matched.



The initial facility in which transfers come from may be considered Critical Access Hospitals (CAHs). All Indiana CAHs are considered Rural, and must meet additional requirements to have a CAH designation, such as having no more than 25 inpatient beds and being located in a rural area. Facilities that are highlighted indicate that these facilities reported data for Quarter 4, 2015.

Within this transfer data section, the purple columns represent the transfer cases and the single percentages represent the percent for the transfer cases. For two demographic variables, patient age groupings and gender, the Indiana average is included to provide more insight to this transfer population.

Indiana Critical Access Hospitals (CAHs)

Adams Memorial Hospital	Perry County Memorial Hospital
Cameron Memorial Community Hospital Inc	Pulaski Memorial Hospital
Community Hospital of Bremen Inc	Putnam County Hospital
Decatur County Memorial Hospital	Rush Memorial Hospital
Dukes Memorial Hospital	Scott Memorial Hospital
Gibson General Hospital	St Vincent Frankfort Hospital Inc
Greene County General Hospital	St Vincent Jennings Hospital Inc
Harrison County Hospital	St Vincent Mercy Hospital
IU Health Bedford Hospital	St Vincent Randolph Hospital Inc
IU Health Blackford Hospital	St Vincent Salem Hospital Inc
IU Health Paoli Hospital	St. Mary's Warrick Hospital Inc
IU Health Tipton Hospital	St. Vincent Clay Hospital Inc
IU Health White Memorial Hospital	St. Vincent Dunn Hospital Inc
Jasper County Hospital	St. Vincent Williamsport Hospital, Inc.
Jay County Hospital	Sullivan County Community Hospital
Margaret Mary Community Hospital Inc	Union Hospital Clinton
Parkview LaGrange Hospital	Woodlawn Hospital
Parkview Wabash Hospital	

Rural Hospitals

Columbus Regional Hospital	Kosciusko Community Hospital
Daviess Community Hospital	Major Hospital
Fayette Regional Health System	Marion General Hospital
Franciscan St Anthony Health - Michigan City	Memorial Hospital
Franciscan St Elizabeth Health - Crawfordsville	Memorial Hospital and Health Care Center
Good Samaritan Hospital	Parkview Noble Hospital
Henry County Memorial Hospital	Reid Hospital & Health Care Services
Indiana University Health La Porte Hospital	Saint Joseph RMC - Plymouth
Indiana University Health Starke Hospital	Schneck Medical Center
King's Daughters' Health	

Indiana Trauma Registry

Statewide Quarter 4 Data Report

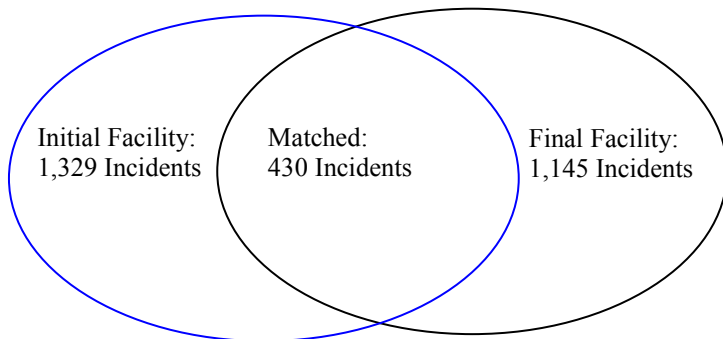
October 1, 2015—December 31, 2015

8,728 Incidents

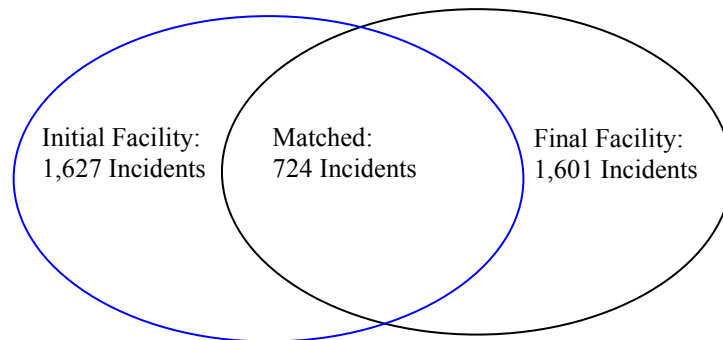
96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

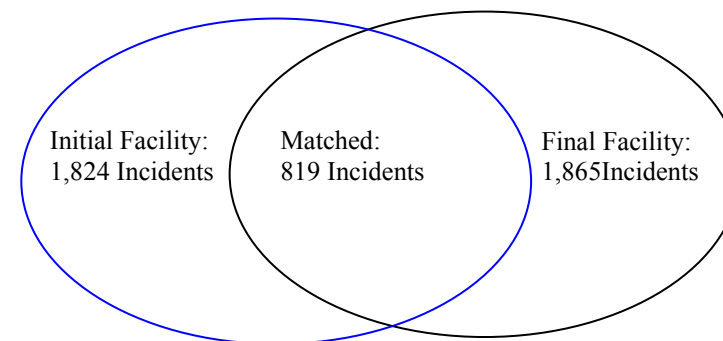
Historical Links



For Quarter 1, 2015, of the 7,050 incidents reported to the Indiana Trauma Registry, 1,329 cases that had an ED Disposition of “Transferred to another acute care facility” at the initial facility or that had the Inter-Facility Transfer equal to “Yes” at the Trauma Center. Of those transferred, 430 cases were probabilistically matched. The linked cases make up 17% of the Q1 2015 data. All public health preparedness districts are represented. The diagram below illustrates the overlap between the transfers reported from the initial facility and from the final facility that can be matched.



For Quarter 2, 2015, of the 8,605 incidents reported to the Indiana Trauma Registry, 1,627 cases that had an ED Disposition of “Transferred to another acute care facility” at the initial facility or that had the Inter-Facility Transfer equal to “Yes” at the Trauma Center. Of those transferred, 724 cases were probabilistically matched. The linked cases make up 22% of the Q2 2015 data. All public health preparedness districts are represented. The diagram below illustrates the overlap between the transfers reported from the initial facility and from the final facility that can be matched.



For Quarter 3, 2015, of the 9,555 incidents reported to the Indiana Trauma Registry, 1,824 cases that had an ED Disposition of “Transferred to another acute care facility” at the initial facility or that had the Inter-Facility Transfer equal to “Yes” at the Trauma Center. Of those transferred, 819 cases were probabilistically matched. The linked cases make up 22% of the Q4 2015 data. All public health preparedness districts are represented. The diagram below illustrates the overlap between the transfers reported from the initial facility and from the final facility that can be matched.

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

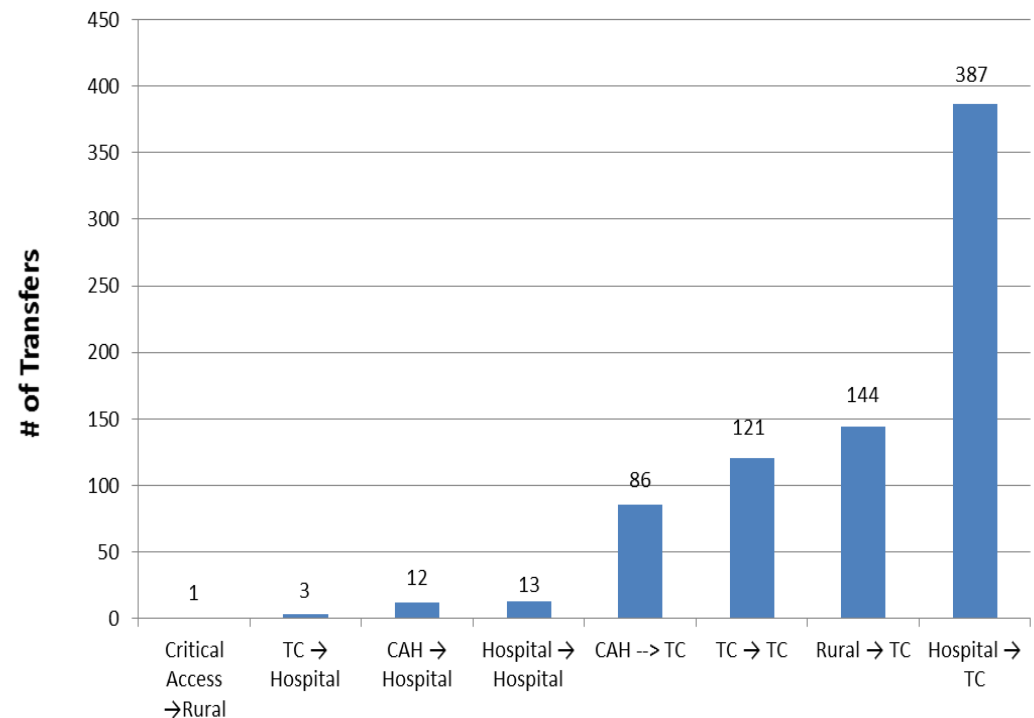
96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

Facility to Facility Transfers

For Transfer Patients:		
Initial Hospital Type	Final Hospital Type	Incident Counts
Critical Access Hospital	Rural Hospital	1
Trauma Center	Hospital	3
Critical Access Hospital	Hospital	12
Hospital	Hospital	13
Critical Access Hospital	Trauma Center	86
Trauma Center	Trauma Center	121
Rural Hospital	Trauma Center	144
Hospital	Trauma Center	387

Facility Transfer Type



Rural = Rural Hospital; TC = ACS Verified or In Process Trauma Center;

CAH = Critical Access Hospital; Hospital = does not fall into above categories

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

For Linked Transfer Patients:

For Transfer Patients:					
	All Transfer Patients	Critical*	Physiological Critical**	ISS Critical***	<u>Ps <0.5****</u>
Number of Patients	767	403	368	70	1
EMS Notified to Scene	7.8 minutes	7.4 minutes	7.4 minutes	7.4 minutes	21 minutes
EMS Scene Arrival to Departure	17.2 Minutes	16.3 minutes	16.5 minutes	16.5 minutes	23 minutes
EMS Scene Departure to Initial Hospital ED Arrival	20.5 minutes	19.6 minutes	19.9 minutes	16.9 minutes	55 minutes
Initial Hospital ED Arrival to Departure	3 hours 9 minutes	3 hours 2 minutes	3 hours 2.8 minutes	2 hours 44.2 minutes	3 hours 2 minutes
Initial Hospital ED Departure to Final Hospital ED Arrival	58.4 minutes	1 hour 0.2 minutes	1 hour 1.2 minutes	52.2 minutes	42 minutes
TOTAL TIME	4 hours 52.9 minutes	4 hours 45.5 minutes	4 hours 47.8 minutes	4 hours 17.2 minutes	5 hours 23 minutes

*Critical patient is defined as having a GCS ≤ 12 , OR Shock Index > 0.9 OR ISS > 15 at the initial hospital.

**Physiological Critical Transfer patient is defined as having a Shock Index > 0.9 OR GCS ≤ 12 at the initial hospital.

***ISS Critical Transfer patient is defined as having an ISS > 15 at the initial hospital

****Patients with a probability of survival ≤ 0.5 at the initial hospital.

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

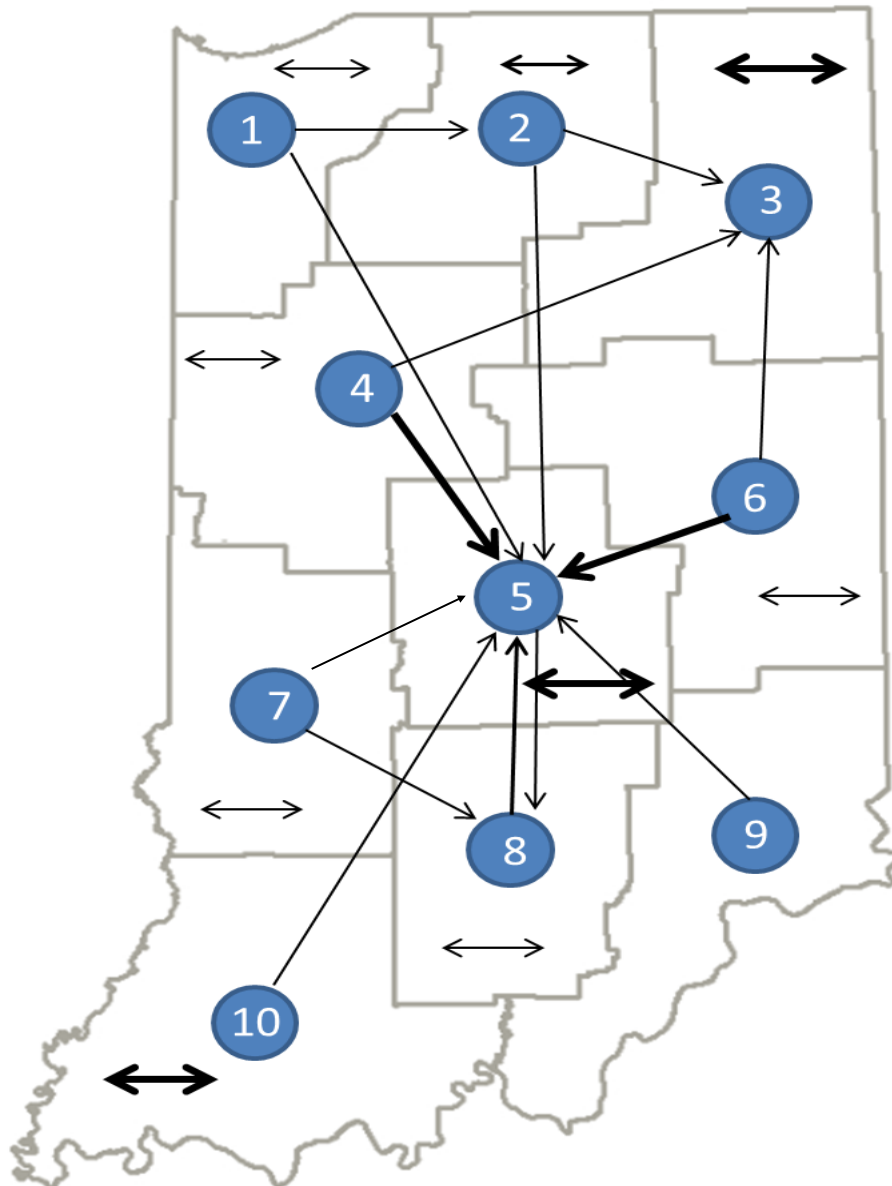
8,728 Incidents

96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data



For Transfer Patients:

Public Health Preparedness District Initial Hospital	Public Health Preparedness District Final Hospital	Incident Counts
1	1	4
1	2	10
1	5	12
2	2	24
2	3	14
2	5	8
3	3	166
3	5	1
4	3	4
4	4	11
4	5	66
5	5	143
5	8	1
6	3	8
6	5	91
6	6	5
7	5	42
7	7	5
8	5	33
8	8	8
9	5	3
10	5	16
10	10	92

*The thickness of the line indicates the frequency of transfers out of or within the public health preparedness district. The circles represent transfers from a specific PHPD, not of a specific hospital or county.

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

For Linked Transfer

For Transfer Patients:					
	All Transfer Patients	<i>Critical*</i>	<i>Physiological Critical**</i>	<i>ISS Critical***</i>	<u><i>Ps <0.5****</i></u>
Number of Patients	767	403	368	70	1
Total Time	4 hours 52.9 minutes	4 hours 45.5 minutes	4 hours 47.8 minutes	4 hours 17.2 minutes	5 hours 23 minutes
Total Mileage	50.3	53.1	53.1	53.9	103.6
Injury Scene to Initial Hospital Mileage***	8.1	8.4	8.5	8.4	43.9
Initial Facility to Final Facility Mileage	42.2	44.7	44.6	45.4	59.8
Estimated Average Distance (miles) by Region (region of final hospital):					
Region	Injury Scene to Initial Facility Mileage†	Initial Facility to Final Facility Mileage	Total Mileage	Drive Count	Air Count
Indiana Average	8.1	42.2	50.3	671	96
North Region	6.5	29.5	36.0	212	14
Central Region	8.4	51.6	60.0	372	65
South Region	10.9	30.2	41.1	84	17

*Critical patient is defined as having a GCS \leq 12, OR Shock Index $>$ 0.9 OR ISS $>$ 15 at the initial hospital.

**Physiological Critical Transfer patient is defined as having a Shock Index $>$ 0.9 OR GCS \leq 12 at the initial hospital.

*** ISS Critical Transfer patient is defined as ISS $>$ 15 at the initial hospital.

****Probability of Survival $<$ 0.5

†Injury Scene to Initial Facility Mileage location estimated by zip code centroid

Statistics for Estimated Average Distance by Region calculated by Public Health Geographics, Epidemiology Resource Center, ISDH

Indiana Trauma Registry

Statewide Quarter 4 Data Report

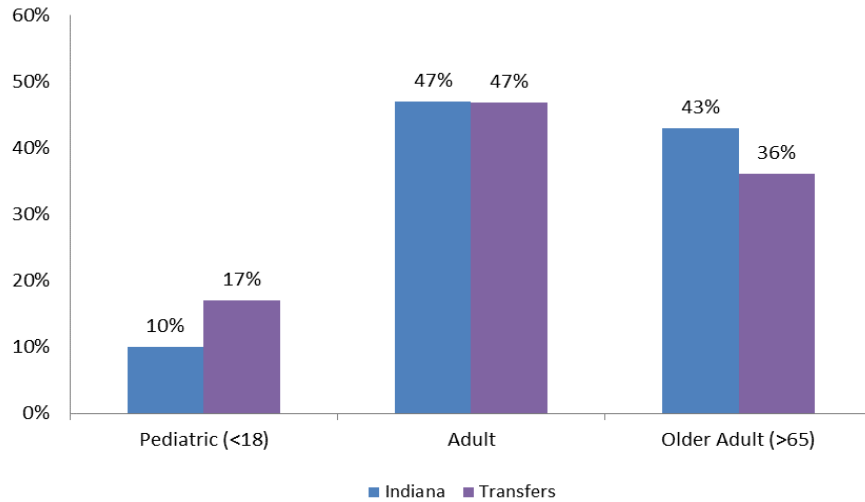
October 1, 2015—December 31, 2015

8,728 Incidents—767 Transfers

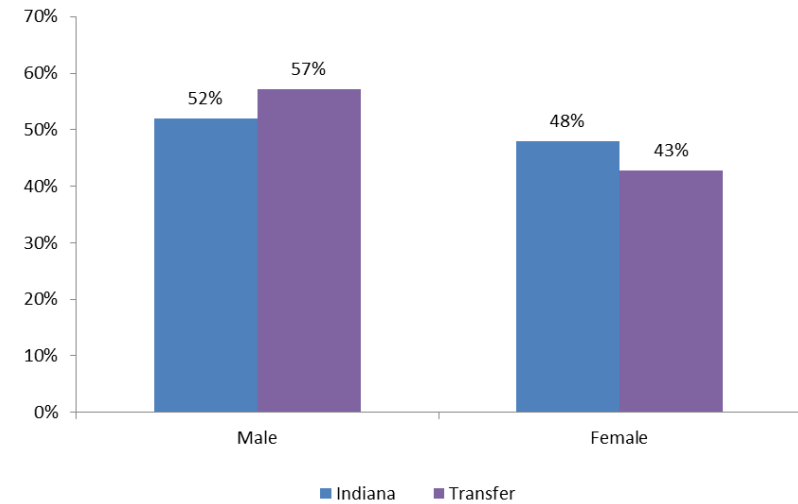
96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

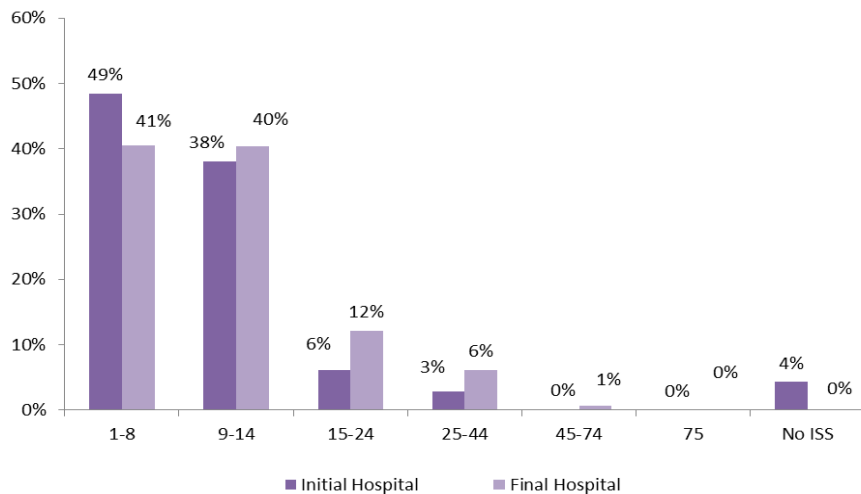
Patient Age Groupings



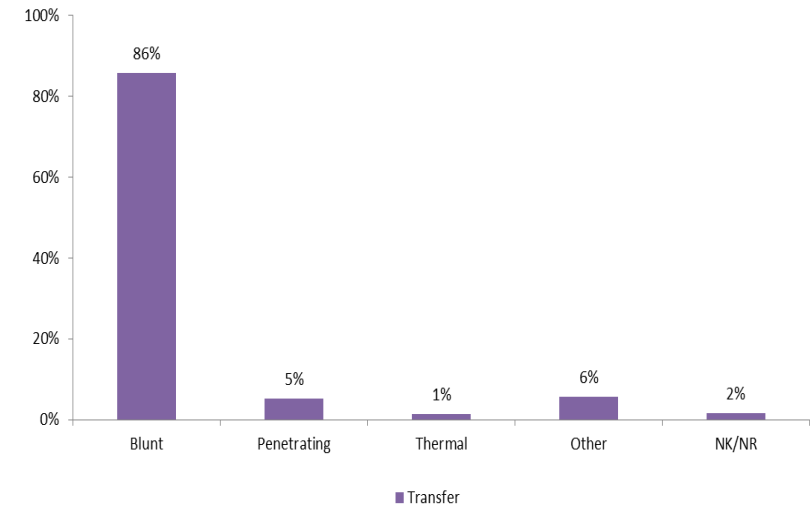
Patient Gender



Injury Severity Score (ISS)



Trauma Type- Final Hospital



Indiana Trauma Registry

Statewide Quarter 4 Data Report

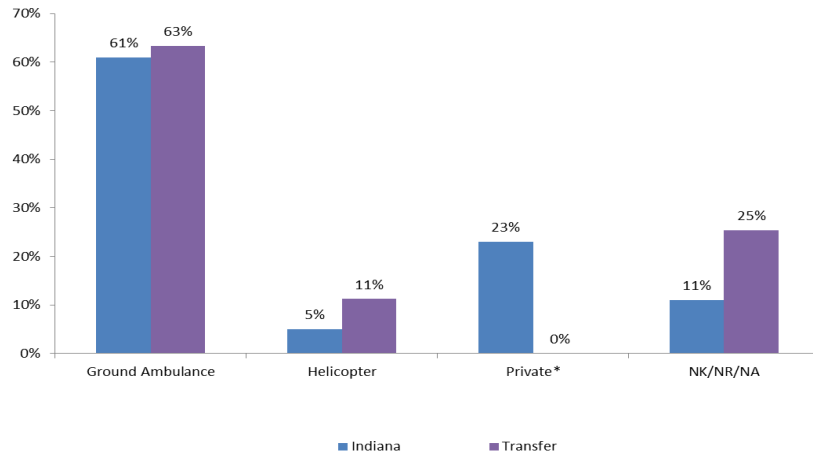
October 1, 2015—December 31, 2015

8,728 Incidents—767 Transfers

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

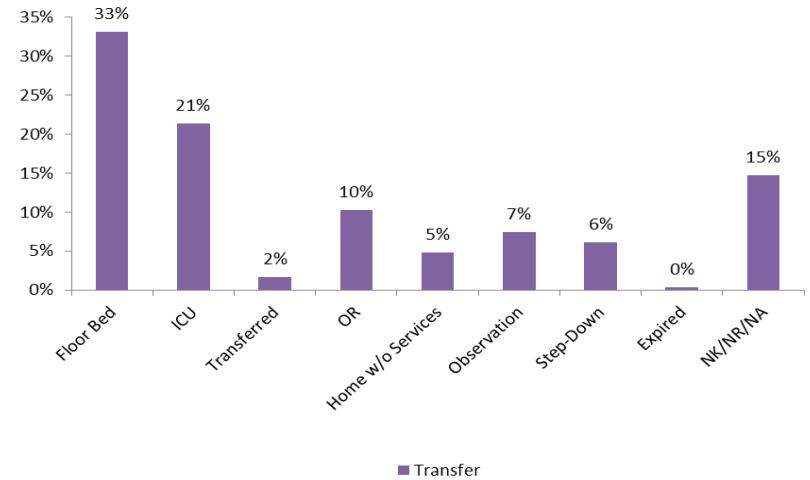
Transport Mode— Final Hospital



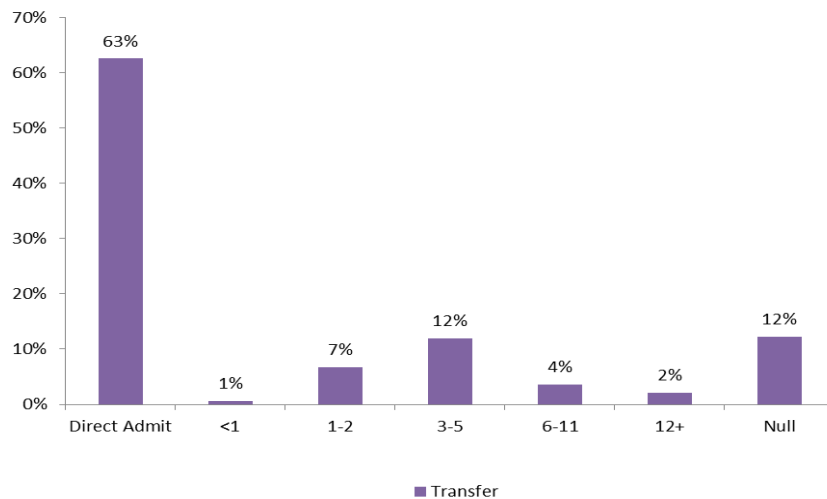
<1% Transport Mode: Police, Other

* Indicates Private/ Public Vehicle, Walk-in

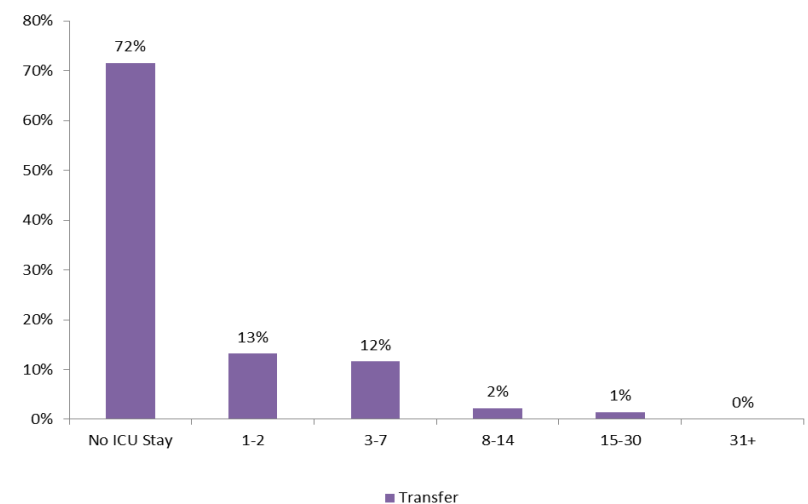
ED Disposition by Percentage- Final Hospital



ED Length of Stay (hours)- Final Hospital



ICU Length of Stay (days)- Final Hospital



Indiana Trauma Registry

Statewide Quarter 4 Data Report

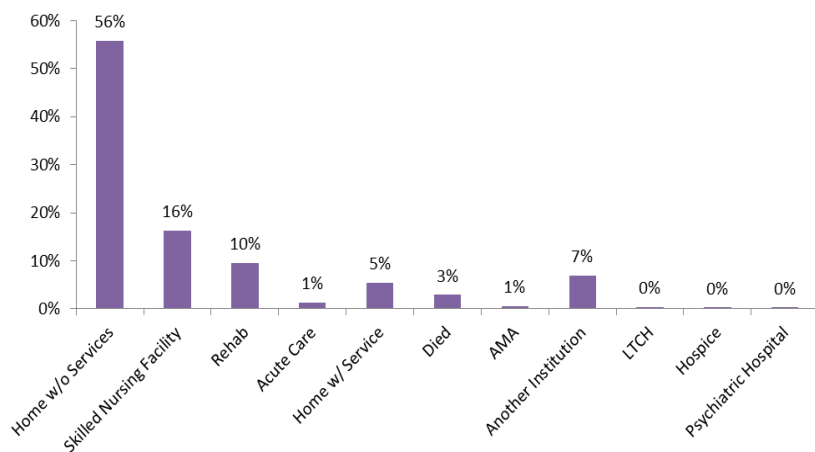
October 1, 2015—December 31, 2015

8,728 Incidents—767 Transfers

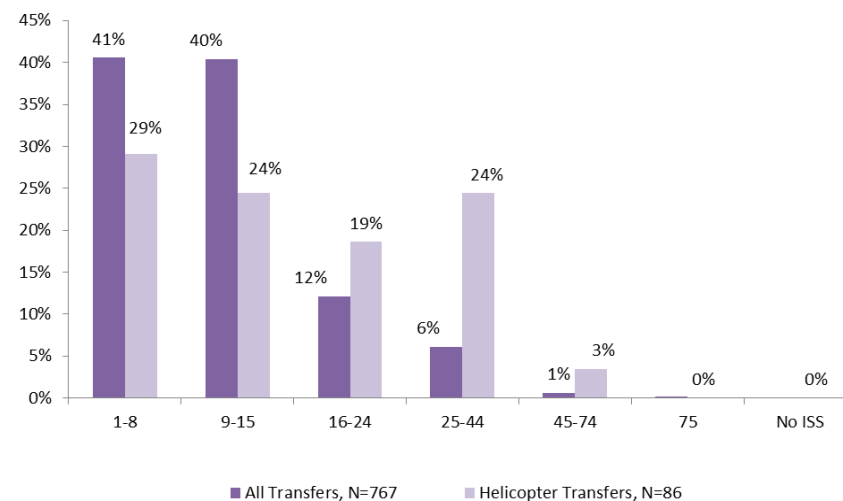
96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

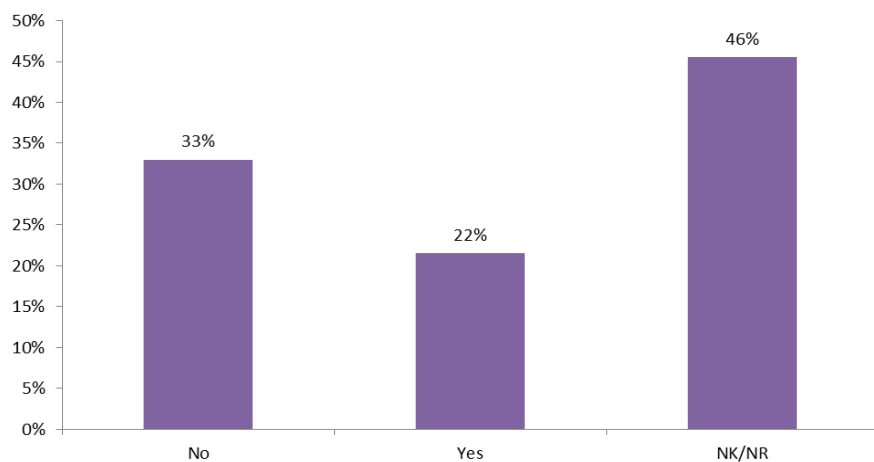
Discharge Disposition— Final Hospital



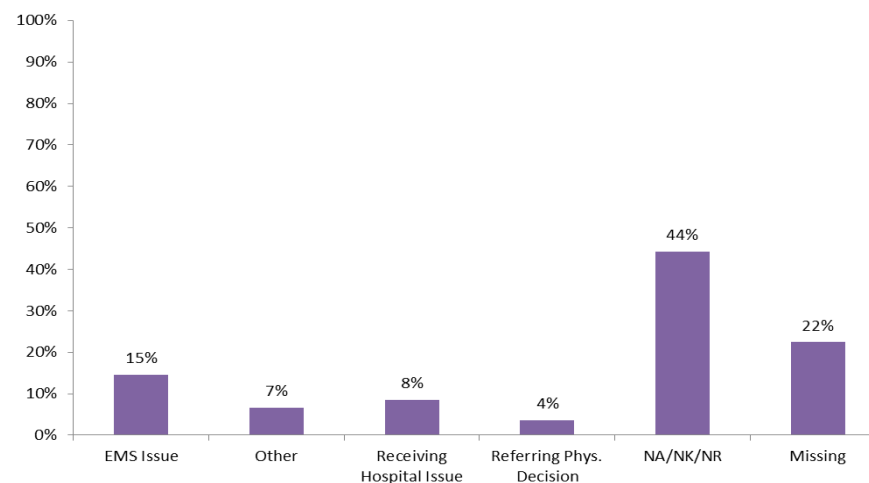
Helicopter Transfers by ISS— Final Hospital



Transfer Delay Indicated- Initial Hospital



Initial Facility Transfer Delay Reason



Indiana Trauma Registry

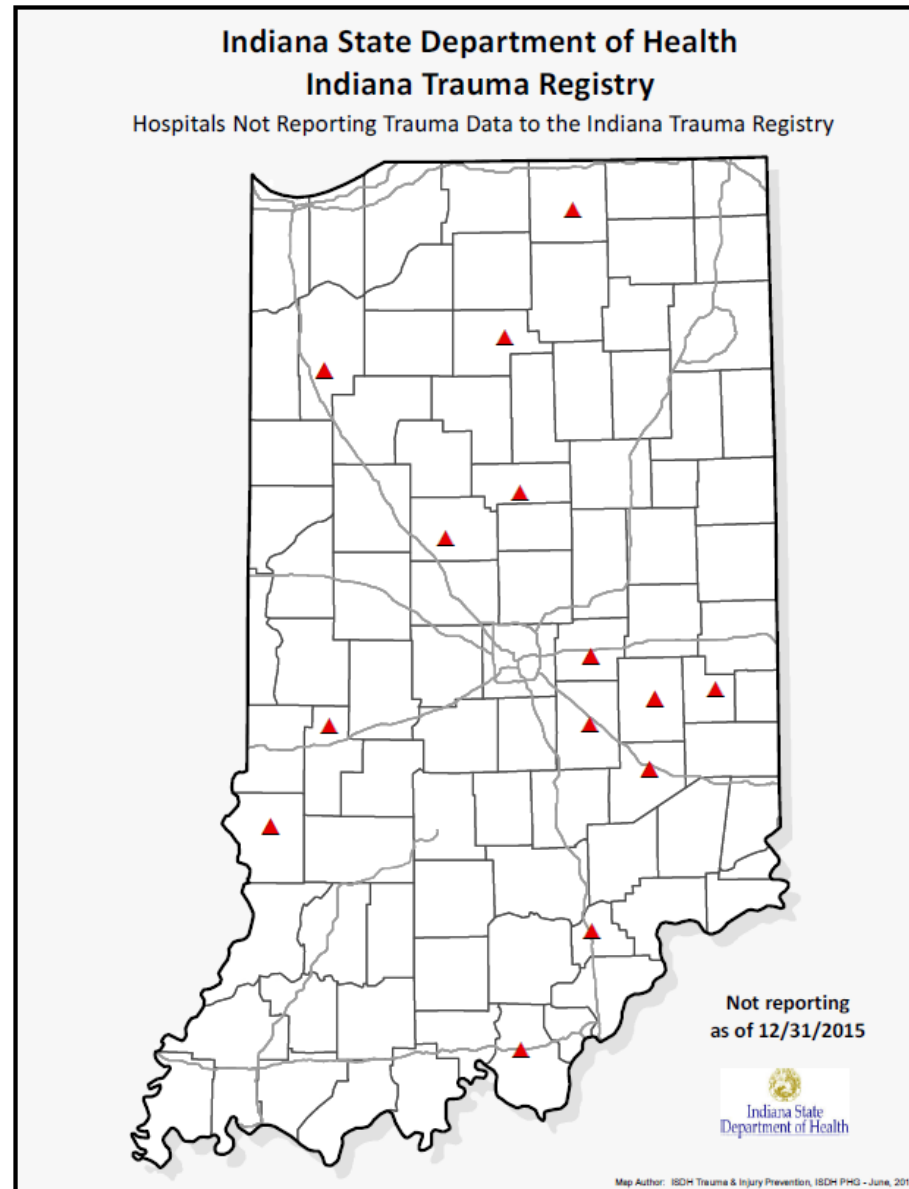
Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

Requests and Changes to the Report from Trauma Care Committee members at the April 2016 ISTCC meeting:

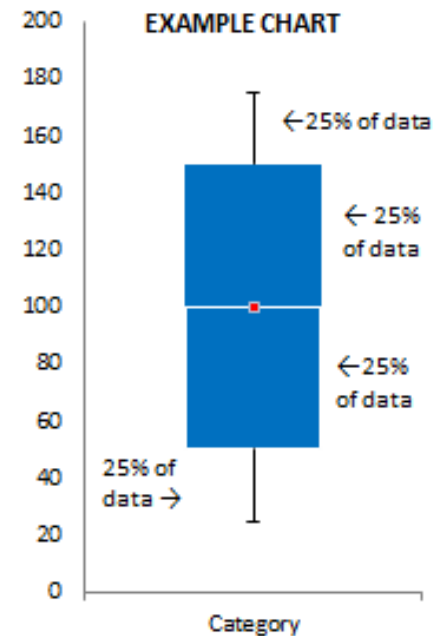
General Report:

- Pages 49-55 have caterpillar plots with the ED LOS for critical transfer patients.
- Signs of Life: The two field values for this variable are: 1) Arrived with no signs of life, 2) Arrived with signs of life. A patient with no signs of life is defined as having none of the following: organized EKG activity, pupillary responses, spontaneous respiratory attempts or movement, and unassisted blood pressure. This usually implies the patient was brought to the ED with CPR in progress.

Example Bar and Whisker Plot:

-Bar and whisker plots were requested at the November 2013 ISTCC meeting in order to show more than just an average ED LOS and ED LOS by ISS. The bar and whisker plots represent the four quartiles of data, as illustrated on the example graph to the right. The blue boxes each contain 25% of the values and the error bars each represent where 25% of the values fell. The median is represented in the middle of the two blue boxes with the white line. The red dot in the center indicates the average for that category. The cap on the error bars indicates the minimum and maximum of each category and all the values fall within the two caps.

-For the ED LOS bar and whisker plots to the right, the average is represented by the white dot and the color boxes reflect the hospital type. The ED LOS by ISS plots on the next page follow the same layout and the red dots indicate the average for each of the ISS categories.



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

Supplemental Report

The Supplemental Report (pages 22-60) contains demographic information, data that stays nearly constant from quarter to quarter, and reference tables and maps.

Definitions:

Direct Admit: Patient is admitted directly to the hospital and does not spend time in Emergency Department. The ED Length of Stay should reflect a direct admittance.

External Cause of Injury: ICD-9-CM codes that are used to describe the mechanism or external factor that caused the injury event.

Trauma Type: The classification of the force applied to the body. Trauma type categories include blunt, penetrating, thermal, and other trauma.

Injury Severity Score: An anatomical scoring system defined as the sum of the three highest squared maximum Abbreviated Injury Scale (AIS) values to account for multiple injuries in the six body regions.

Signs of Life: The two field values for this variable are: 1) Arrived with no signs of life, 2) Arrived with signs of life. A patient with no signs of life is defined as having none of the following: organized EKG activity, pupillary responses, spontaneous respiratory attempts or movement, and unassisted blood pressure. This usually implies the patient was brought to the ED with CPR in progress.

Acronyms:

E-code: External Cause of Injury	MVC: Motor Vehicle Collision
ED: Emergency Department	OR: Operating Room
ICU: Intensive Care Unit	Ps: Probability of Survival
ISS: Injury Severity Score	CAHs: Critical Access Hospital
LOS: Length of Stay	

Calculations:

$Ps = 1/(1+e^{-b})$ where $b=b_0+b1(RTS) + b2(ISS) + b3(Age\ Index)$

Total GCS = Verbal GCS + Motor GCS + Eye GCS

$RTS = 0.94 * GCS + 0.73 * SBP + 0.29 * RR$

$ISS = (AIS)^2 + (AIS)^2 + (AIS)^2$



Indiana State
Department of Health
Trauma and Injury Prevention

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

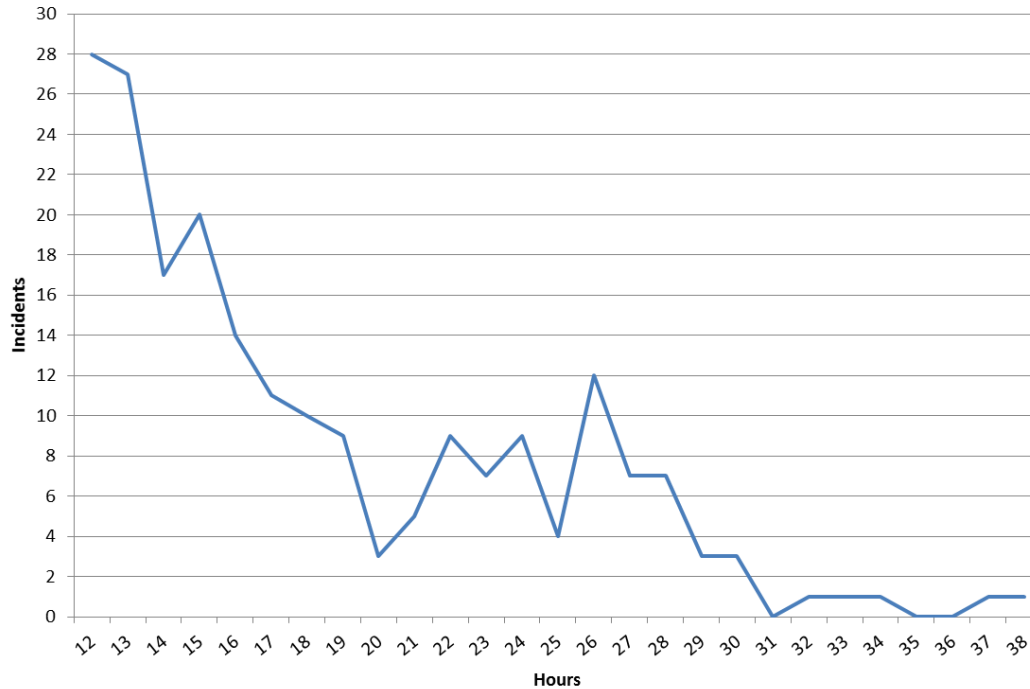
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED LOS ≥ 12 Hours



N=197

ED Length of Stay ≥ 12 Hours

Hour	Count	Hour	Count
12th	28	26th	12
13th	27	27th	7
14th	17	28th	7
15th	20	29th	3
16th	14	30th	3
17th	11	31st	0
18th	10	32nd	1
19th	9	33rd	1
20th	3	34th	1
21st	5	34th	1
22nd	9	35th	0
23rd	7	36th	0
24th	9	37th	1
25th	4	38th	1

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

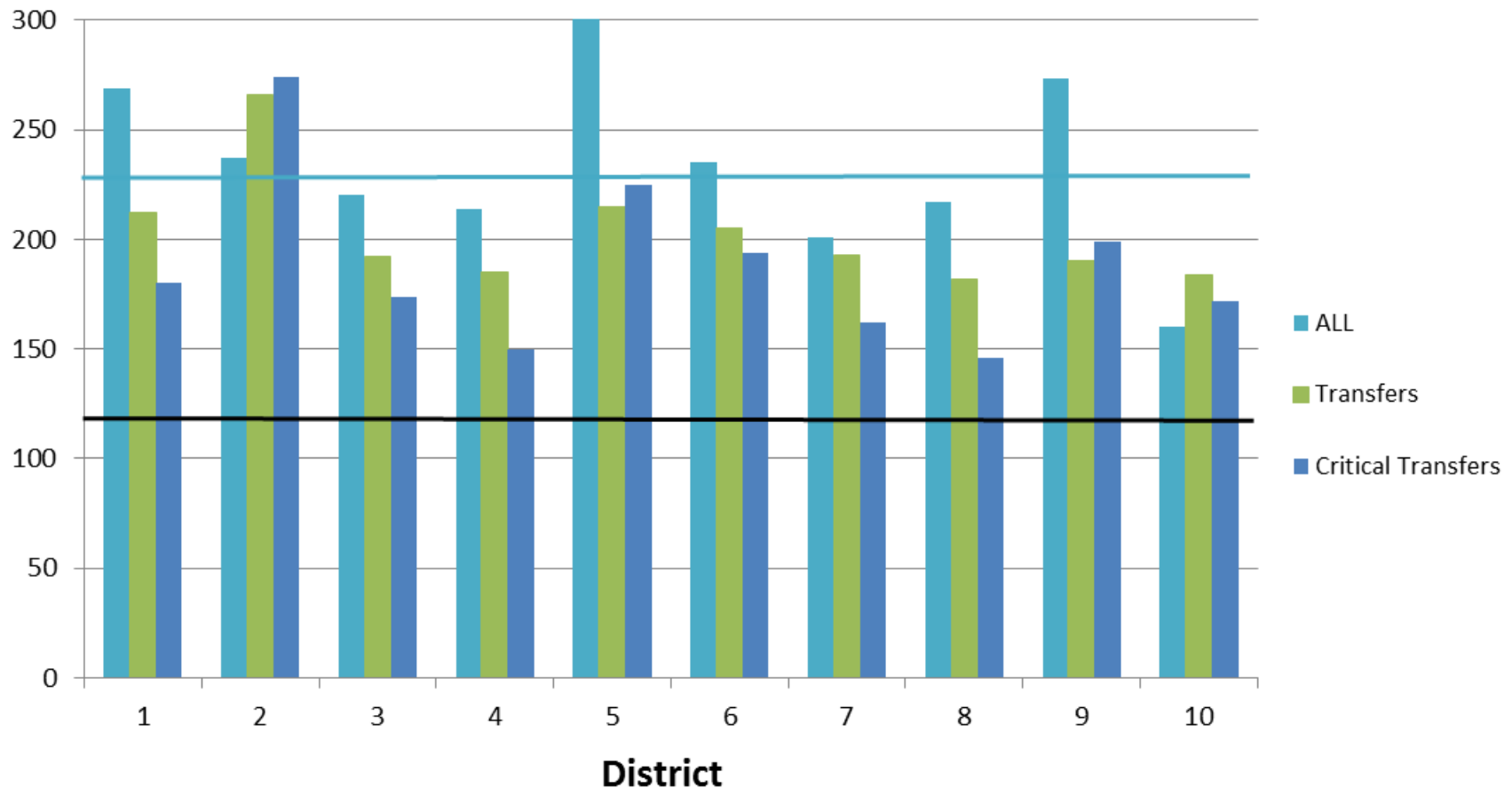
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

Average ED LOS (Minutes)



*Black line represents the 120 minute ACS goal.

**Blue line represents the state average.

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

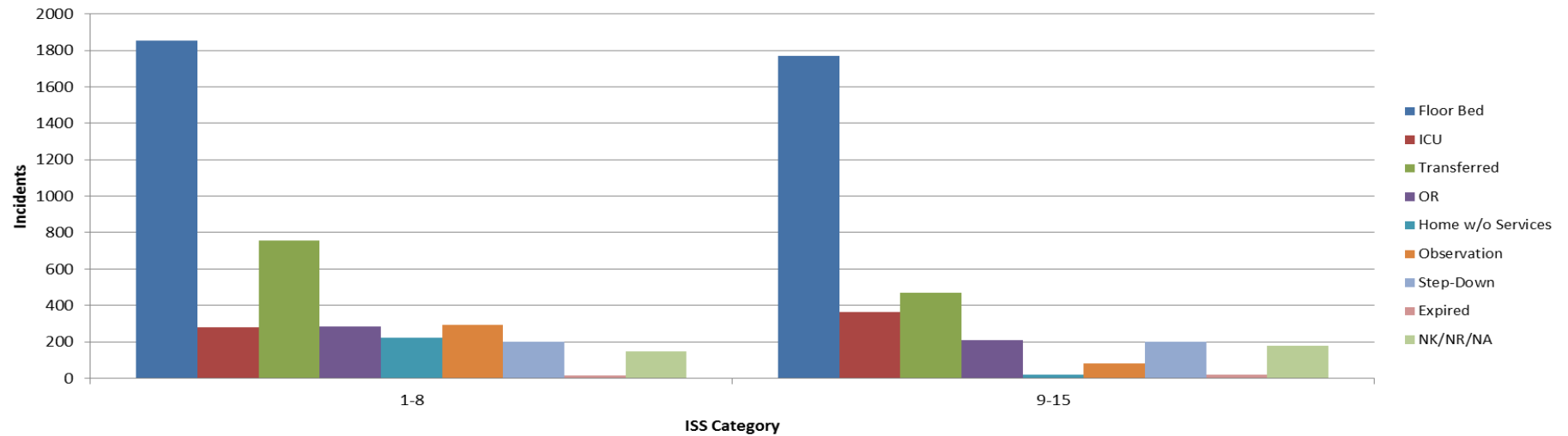
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

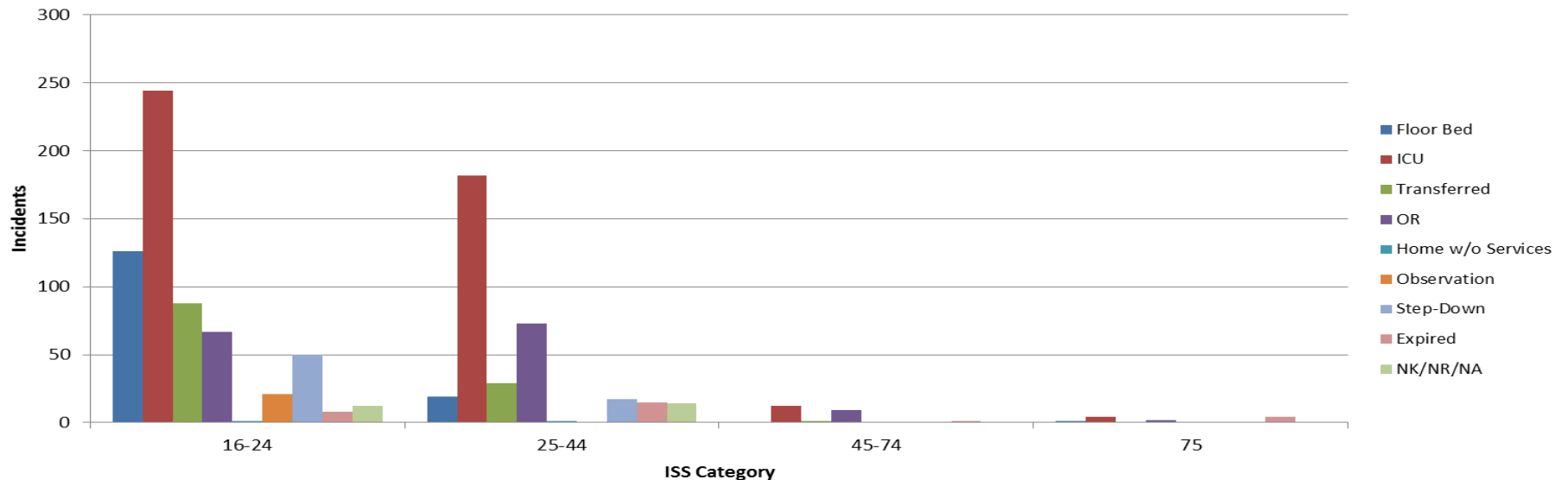
Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition by ISS 1-15



ED Disposition by ISS 16-75



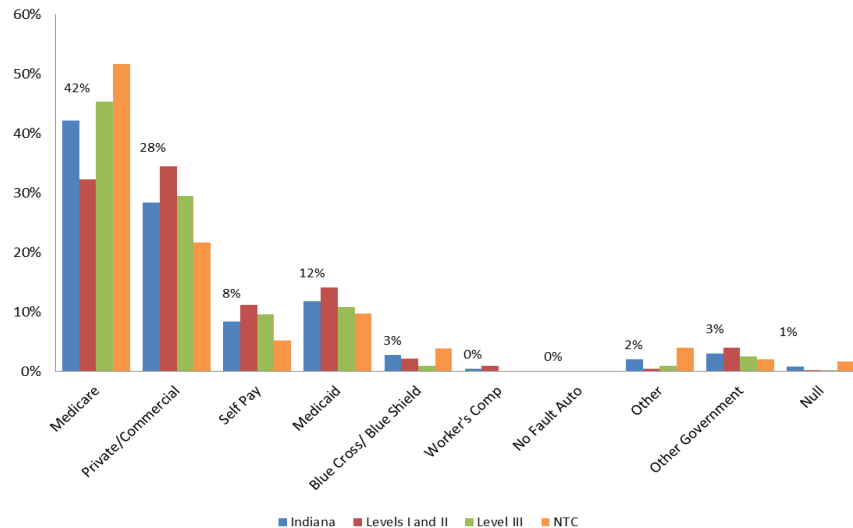
Indiana Trauma Registry

Statewide Quarter 4 Data Report October 1, 2015—December 31, 2015 8,728 Incidents

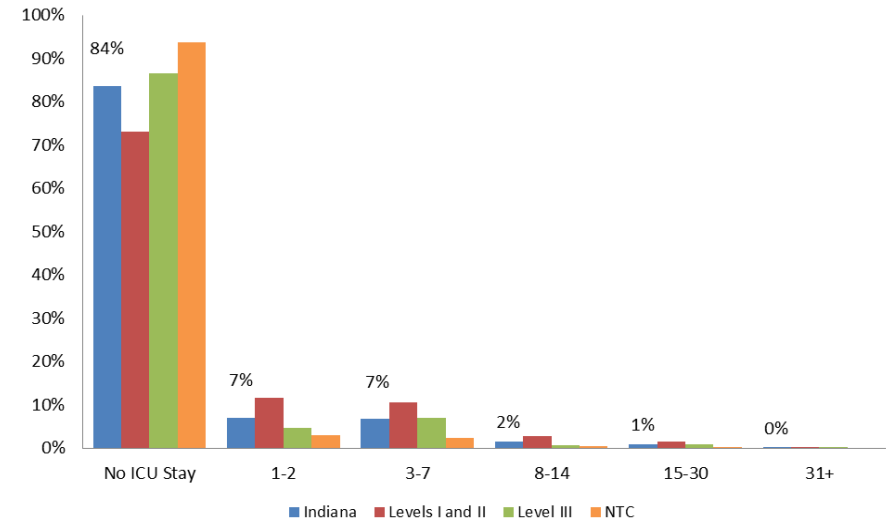
96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

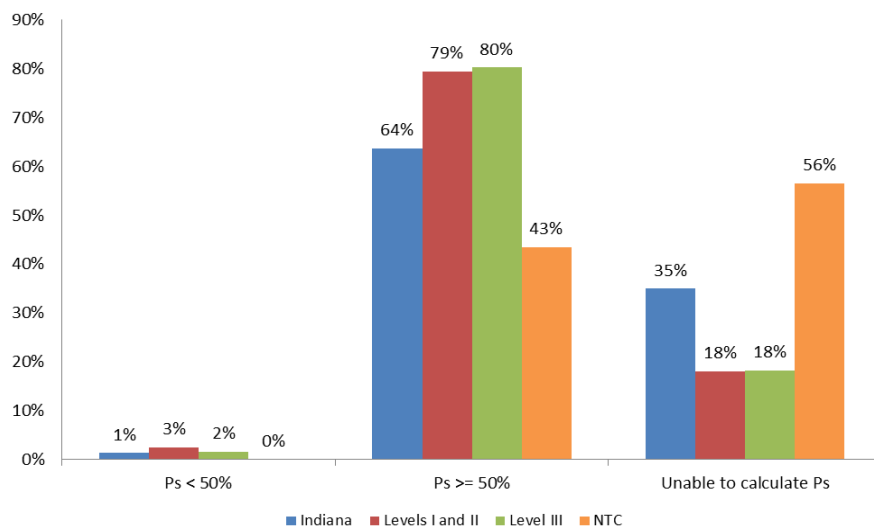
Primary Payer Mix



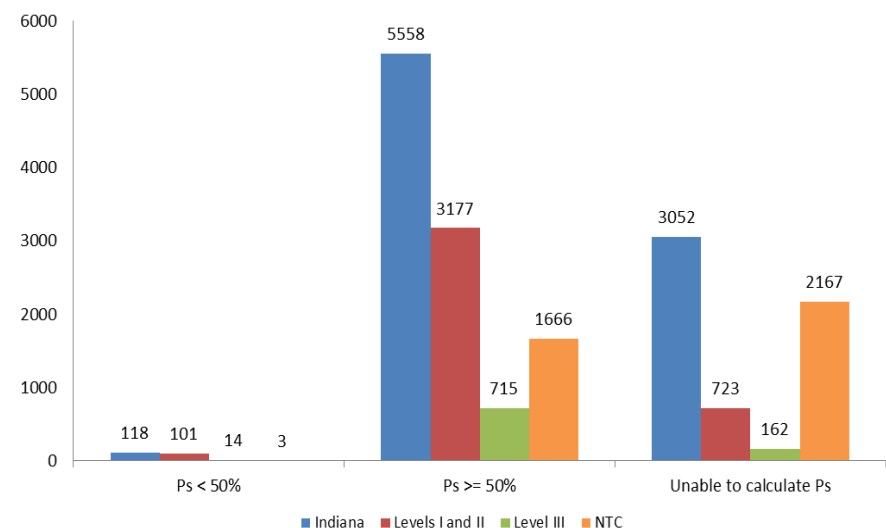
ICU Length of Stay (Days)



Probability of Survival (Ps) by Percent



Probability of Survival (Ps) by Count



Due to the many data points required to calculate Ps, not every patient has a calculated Ps. These two graph represents 5,676 (65%) incidents with calculated Ps.

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

Probability of Survival Components—All Patients

		Count Missing				Percent Missing			
Components		Indiana	Levels I and II	Level III	Non-Trauma Center	Indiana	Levels I and II	Level III	Non-Trauma Centers
RTS	GCS	2,841	616	147	2078	32.55%	15.40%	16.50%	54.17%
	SBP	417	122	22	273	4.78%	3.05%	2.47%	7.12%
	Respiratory Rate	395	140	17	238	4.53%	3.50%	1.91%	6.20%
ISS		8	0	0	8	0.09%	0.00%	0.00%	0.21%
Age		8	0	0	8	0.09%	0.00%	0.00%	0.21%

$$\text{RTS} = 0.9368 * \text{GCS} + 0.7326 * \text{SBP} + 0.2908 * \text{Respiratory Rate}$$

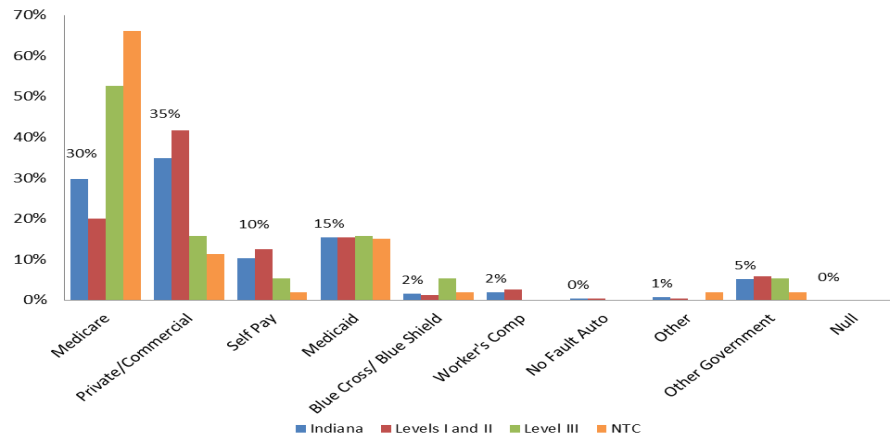
Indiana Trauma Registry

Statewide Quarter 4 Data Report
October 1, 2015—December 31, 2015
8,728 Incidents

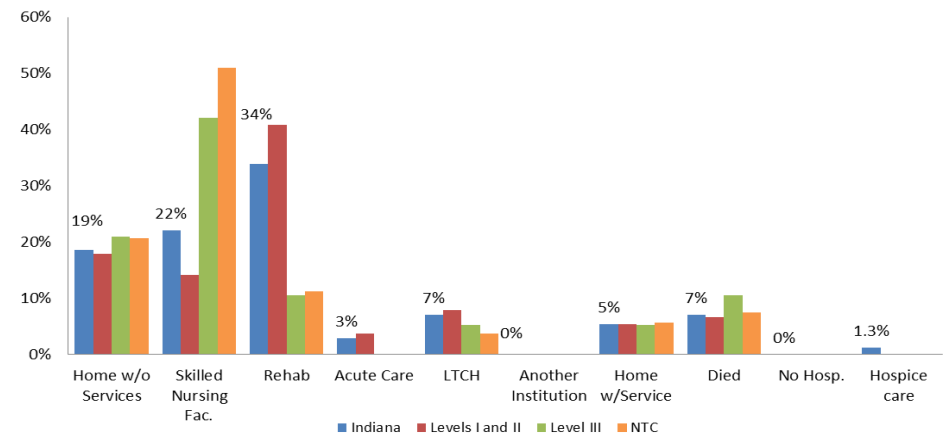
96 Total Hospitals Reporting
 Level I and II: **9 facilities** **45.8% of data**
 Level III: **7 facilities** **10.2% of data**
 (Non-Trauma) Hospitals: **80 facilities** **44.0% of data**

Hospital Length of Stay > 15 days, N=278

Primary Payer Mix

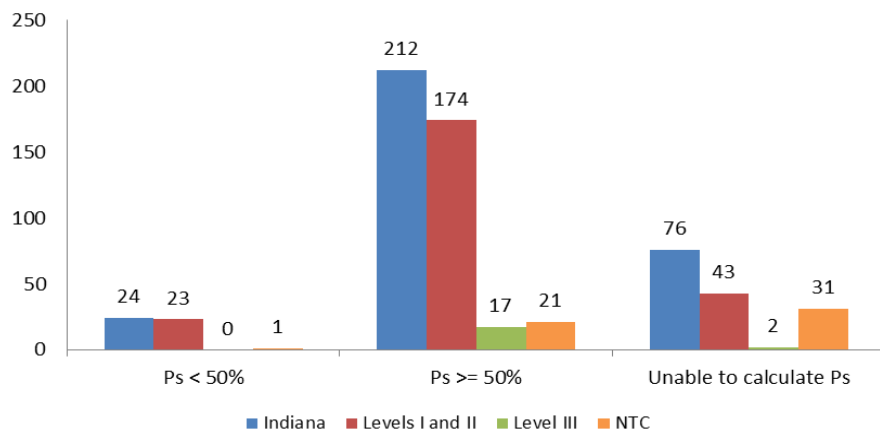


Hospital Disposition



Another Institution includes any other medical facility not defined in the other categories.

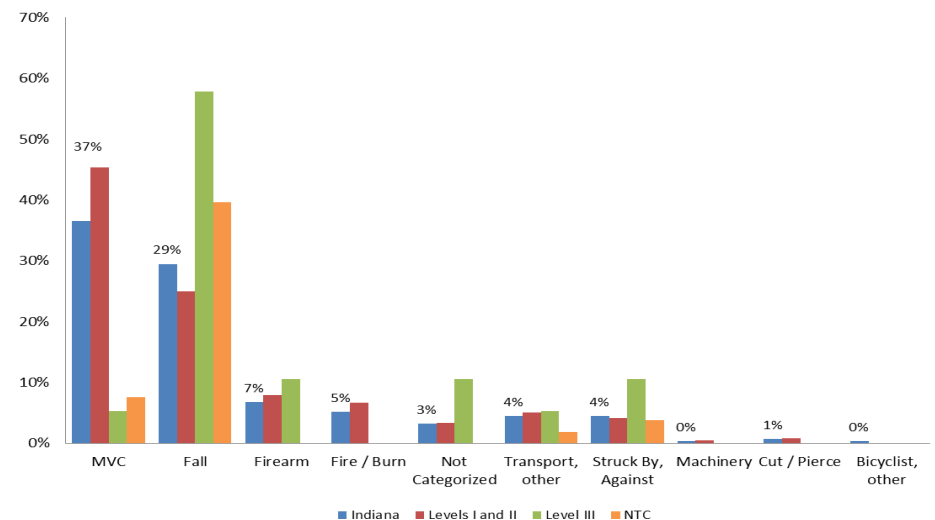
Probability of Survival



Hospital Length of Stay > 15 Days: Total N=312;
 Level III N=19:

Levels I and II N= 240;
 NTC N=53

Cause of Injury



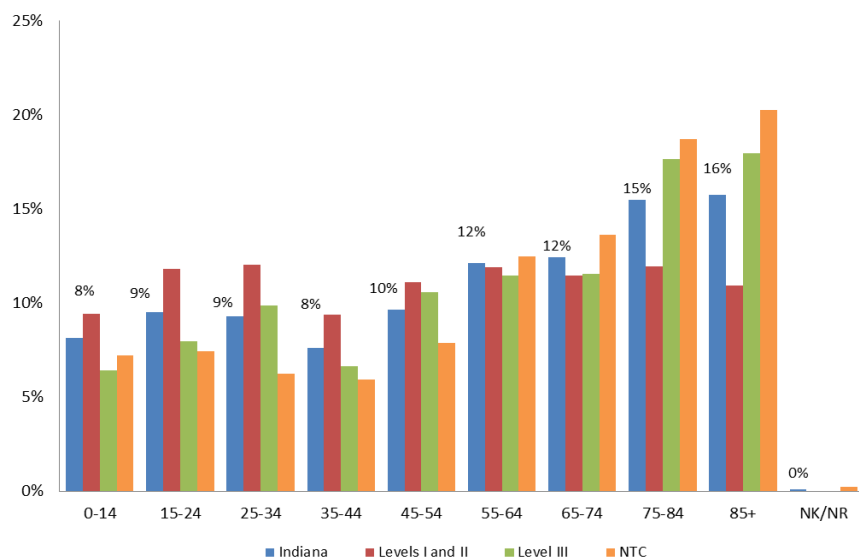
Indiana Trauma Registry

Statewide Quarter 4 Data Report October 1, 2015—December 31, 2015 8,728 Incidents

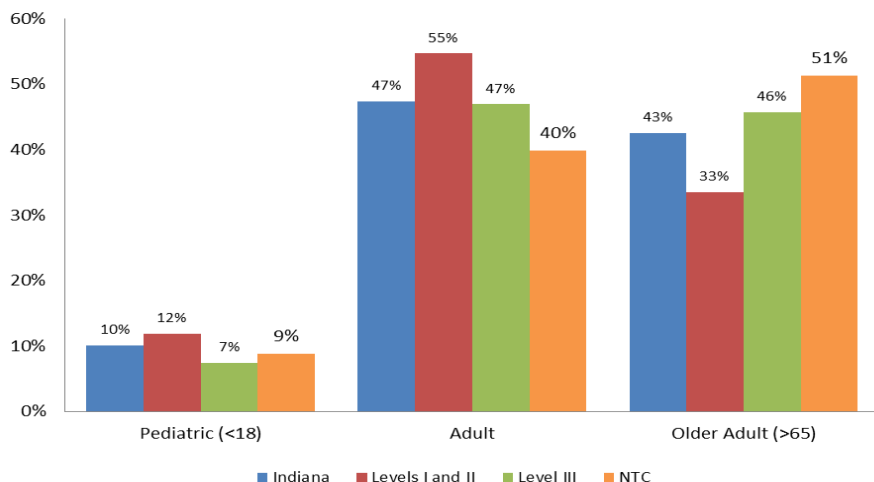
96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

Patient Age (Years)



Patient Age Groupings



Age Group	Indiana	Level I and II	Level III	NTC
0-14	710	377	57	276
15-24	829	473	71	285
25-34	810	482	88	240
35-44	663	376	59	228
45-54	840	444	94	302
55-64	1057	476	102	479
65-74	1085	459	103	523
75-84	1352	477	157	718
85+	1374	437	160	777
NK/NR	8	0	0	8
Total	8728	4001	891	3836

Age Group	Indiana	Level I and II	Level III	NTC
Pediatric (<18)	877	474	66	337
Adult	4133	2188	418	1527
Older Adult (>65)	3710	1339	407	1964
Total	8720	4001	891	3828

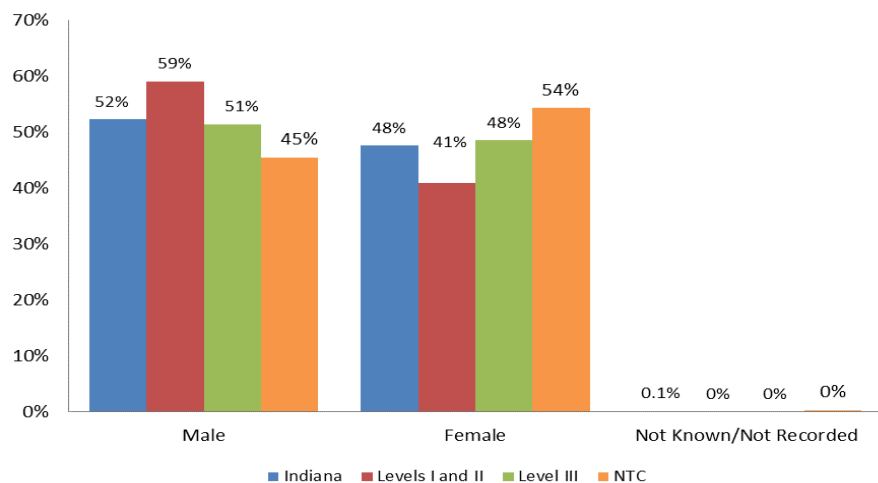
Indiana Trauma Registry

Statewide Quarter 4 Data Report October 1, 2015—December 31, 2015 8,728 Incidents

96 Total Hospitals Reporting

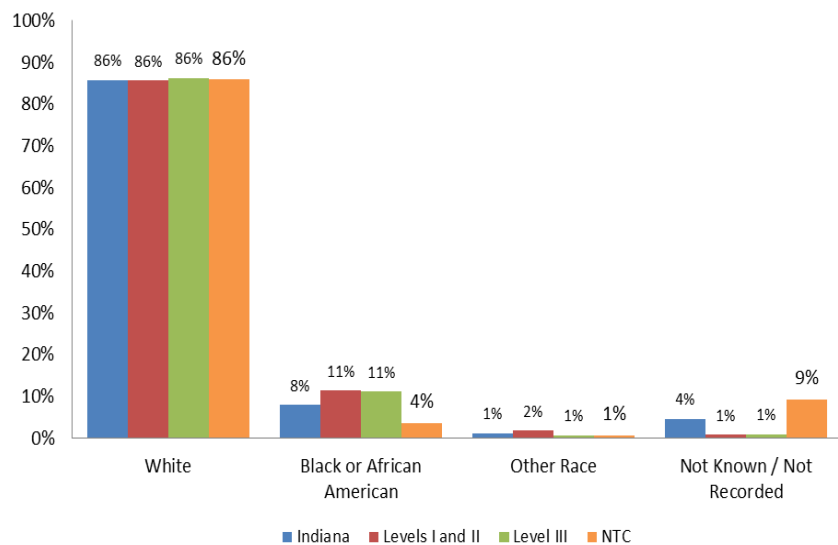
Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

Patient Gender



Gender	Indiana	Level I and II	Level III	NTC
Male	4564	2363	458	1743
Female	4152	1638	432	2082
Unknown	12	0	1	11
Total	8728	4001	891	3836

Patient Race



Race	Indiana	Level I and II	Level III	NTC
White	7485	3424	768	3293
Black or African American	688	454	99	135
Other	102	70	5	27
Not Known/Not Recorded	392	29	8	355
American Indian or Alaska Native	7	2	2	3
Asian	47	19	7	21
Native Hawaiian or Pacific Islander	7	3	2	2
Total	8728	4001	891	3836

<1% Race - Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native

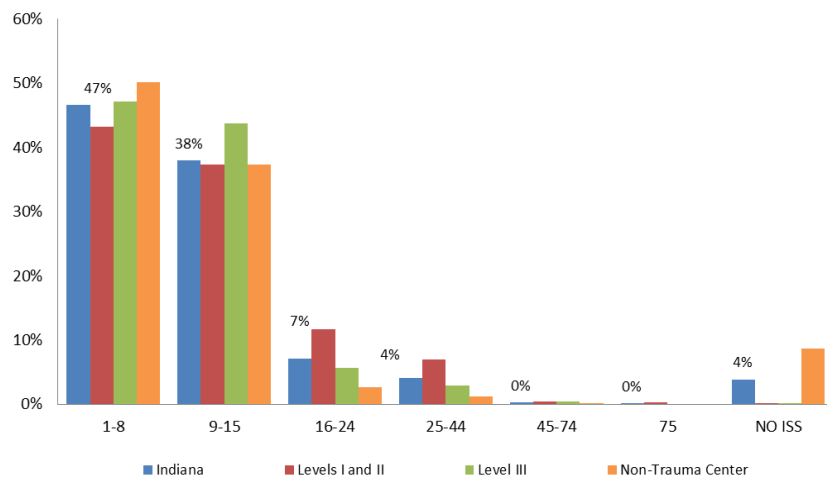
Indiana Trauma Registry

Statewide Quarter 4 Data Report October 1, 2015—December 31, 2015 8,728 Incidents

96 Total Hospitals Reporting

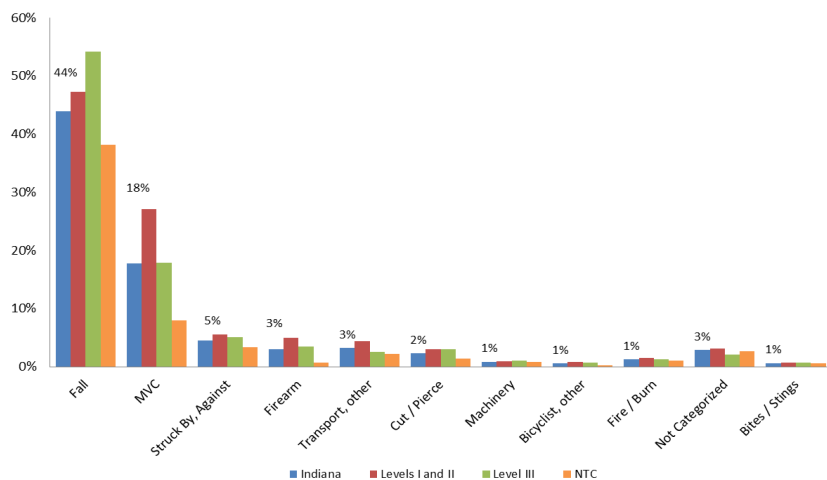
Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

Injury Severity Score (ISS)



There were 23 and 11 cases in the 45-74 and 75+ categories, respectively

Cause of Injury



<1% COI: Pedestrian Traffic Accident, Natural/Environment, Overexertion, No E-Code

ISS Category	Indiana	Level I and II	Level III	NTC
1-8	4072	1728	420	1924
9-15	3318	1496	390	1432
16-24	617	468	50	99
25-44	351	278	26	47
45-74	23	18	4	1
75	11	11	0	0
No ISS	336	2	1	333
Total	8728	4001	891	3836

Cause of Injury	Indiana	Level I and II	Level III	NTC
Fall	4529	1673	477	2379
MVC	1915	1241	217	457
Struck By, Against	603	314	63	226
Firearm	289	186	57	46
Transport	459	283	30	146
Cut / Pierce	260	130	34	96
Machinery	107	53	7	47
Bicyclist	176	105	10	61
Fire/Burn	154	77	12	65
Not Categorized	391	129	25	237
Bites/Stings	57	15	7	35

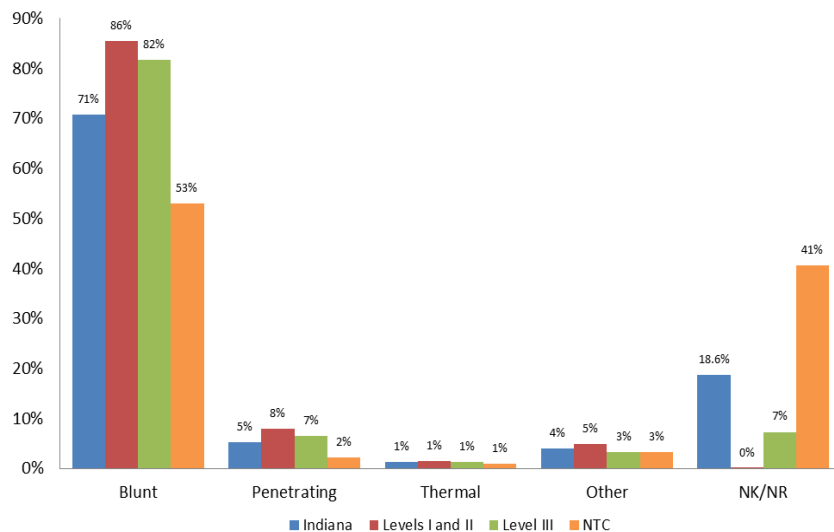
Indiana Trauma Registry

Statewide Quarter 4 Data Report October 1, 2015—December 31, 2015 8,728 Incidents

96 Total Hospitals Reporting

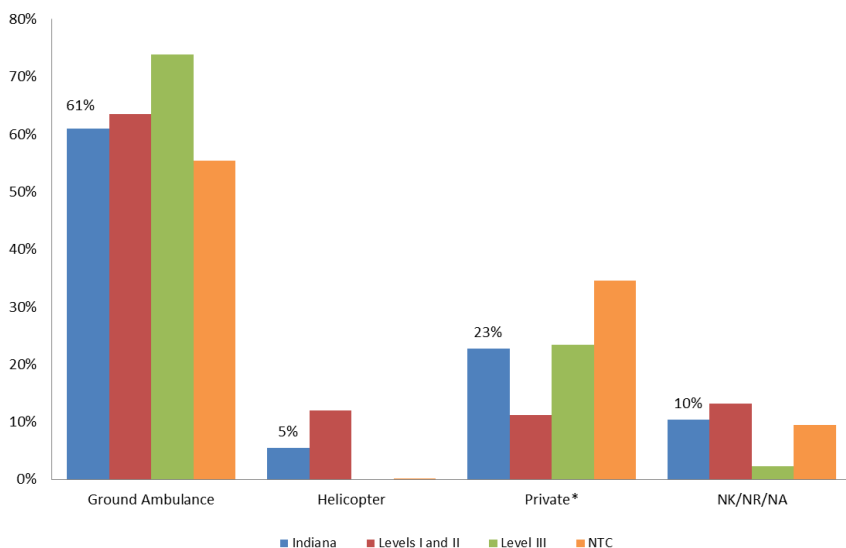
Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

Trauma Type



Trauma Type	Indiana	Level I and II	Level III	NTC
Blunt	6181	3423	728	2030
Penetrating	459	319	58	82
Thermal	109	60	11	38
Other	353	197	29	127
NK/NR	1626	2	65	1559
Total	8728	4001	891	3836

Transport Mode



Transport Mode	Indiana	Level I and II	Level III	NTC
Ground Ambulance	5327	2542	658	2127
Helicopter	480	477	0	3
Private	1985	449	209	1327
NK/NR/NA	911	529	20	362
Police	24	4	4	16
Other	1	0	0	1
Total	8728	4001	891	3836

<1% Transport Mode: Police, Other

* Indicates Private/ Public Vehicle, Walk-in

Indiana Trauma Registry

Statewide Quarter 4 Data Report

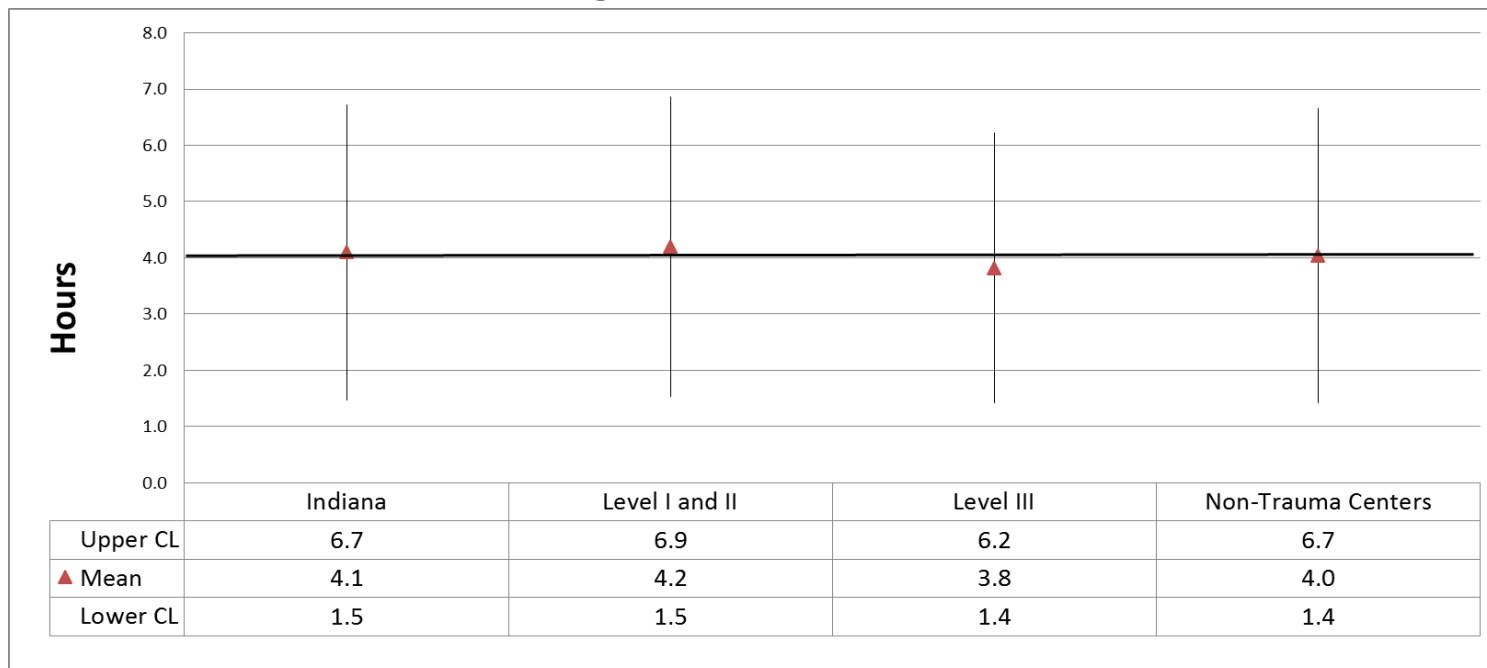
October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

All Patients Average ED LOS (Hours)



The purpose of the caterpillar graphs is to compare different groups to the average ED LOS. The Indiana mean is the comparison group, which is represented by the black line.

The ED LOS for these graphs was modeled using time-to-event analysis. The purposes of using this analysis were to account for censoring (death) and to see how variables influence ED LOS. The outcome variable was ED LOS and the independent variables were total GCS and age. If total GCS was missing but manual total GCS was recorded, then the manual total GCS was used. These two variables were used because they were the most similar to variables used in the published, peer-reviewed literature on ED LOS. Both were significant in the model. Increasing total GCS and age led to a slightly shorter ED LOS. Hospitals that did not have enough incidents with total GCS or age could not be modeled.

In the chart on the left, note the trauma center average is above the mean and the non-trauma center is below the mean. The mean, 95% confidence limit and lower confidence limit are listed for each group.

In the chart on the right, the data is for the trauma centers. The trauma center average is in the first column on the left side. The information for each trauma center has been assigned a random number for confidentiality. The mean, 95% confidence limit and lower confidence limit are listed for each group.

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

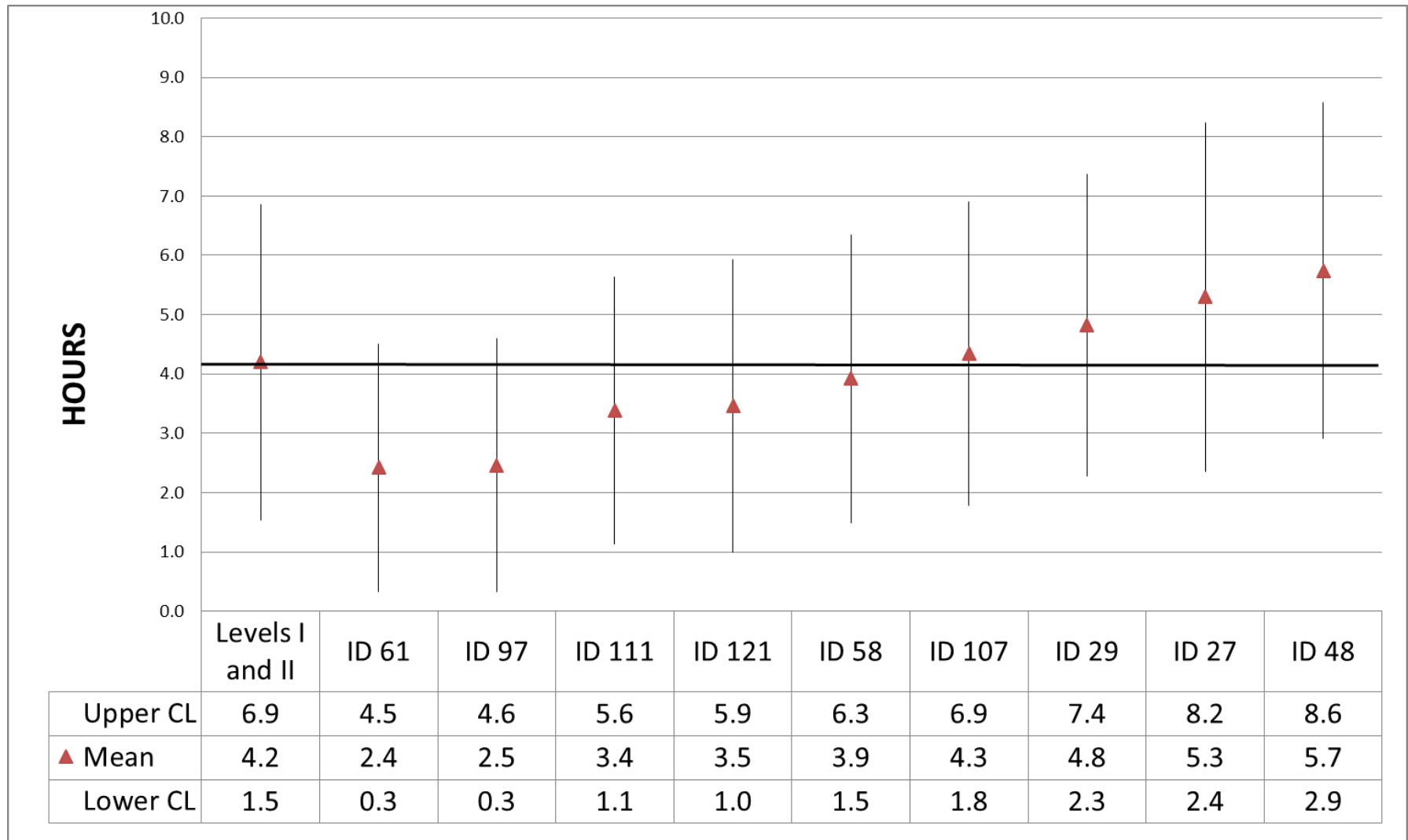
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

All Patients

Level I and II Trauma Centers ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

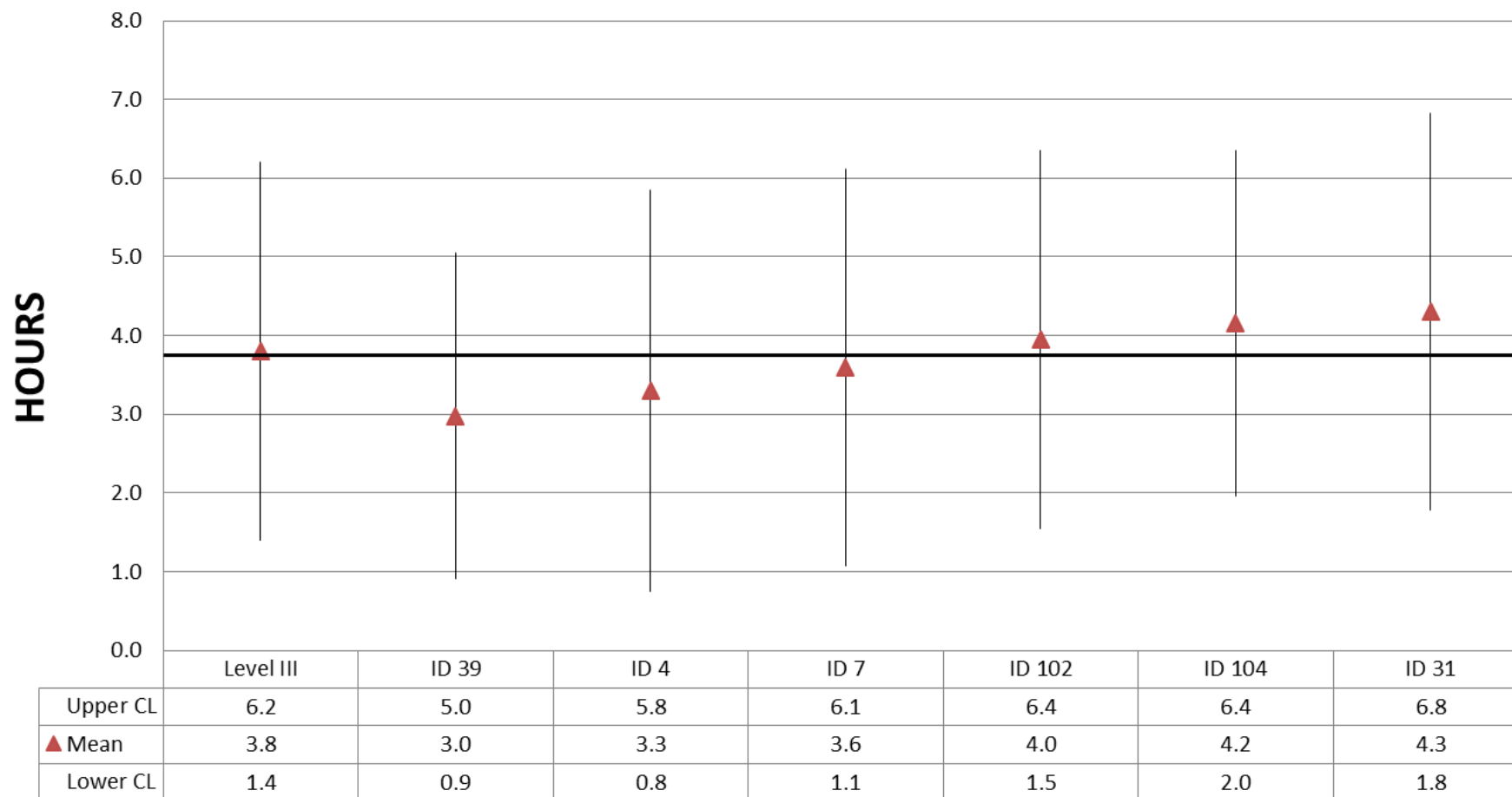
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

All Patients

Level III Trauma Centers ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

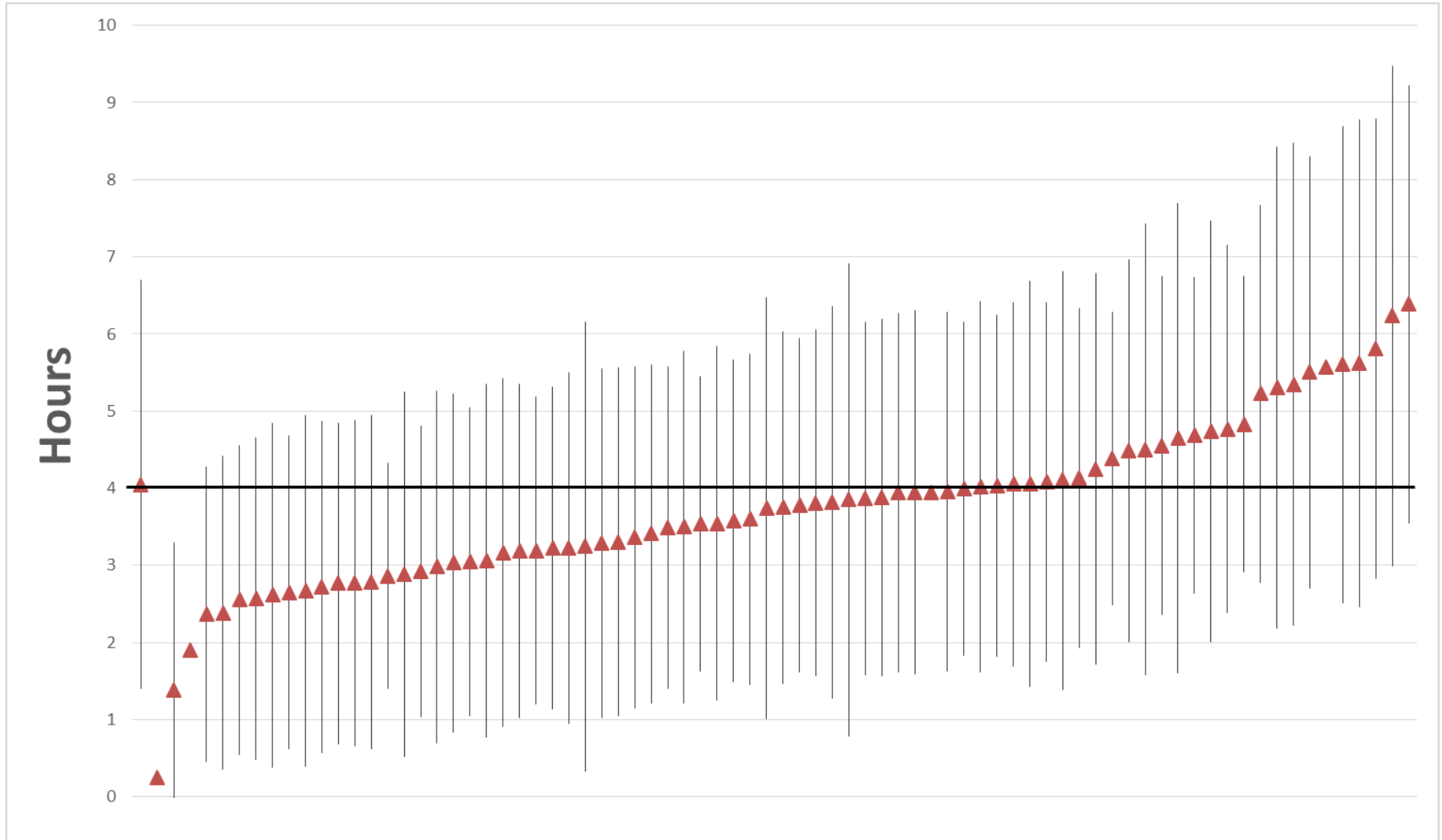
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

All Patients

Non-trauma Centers ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

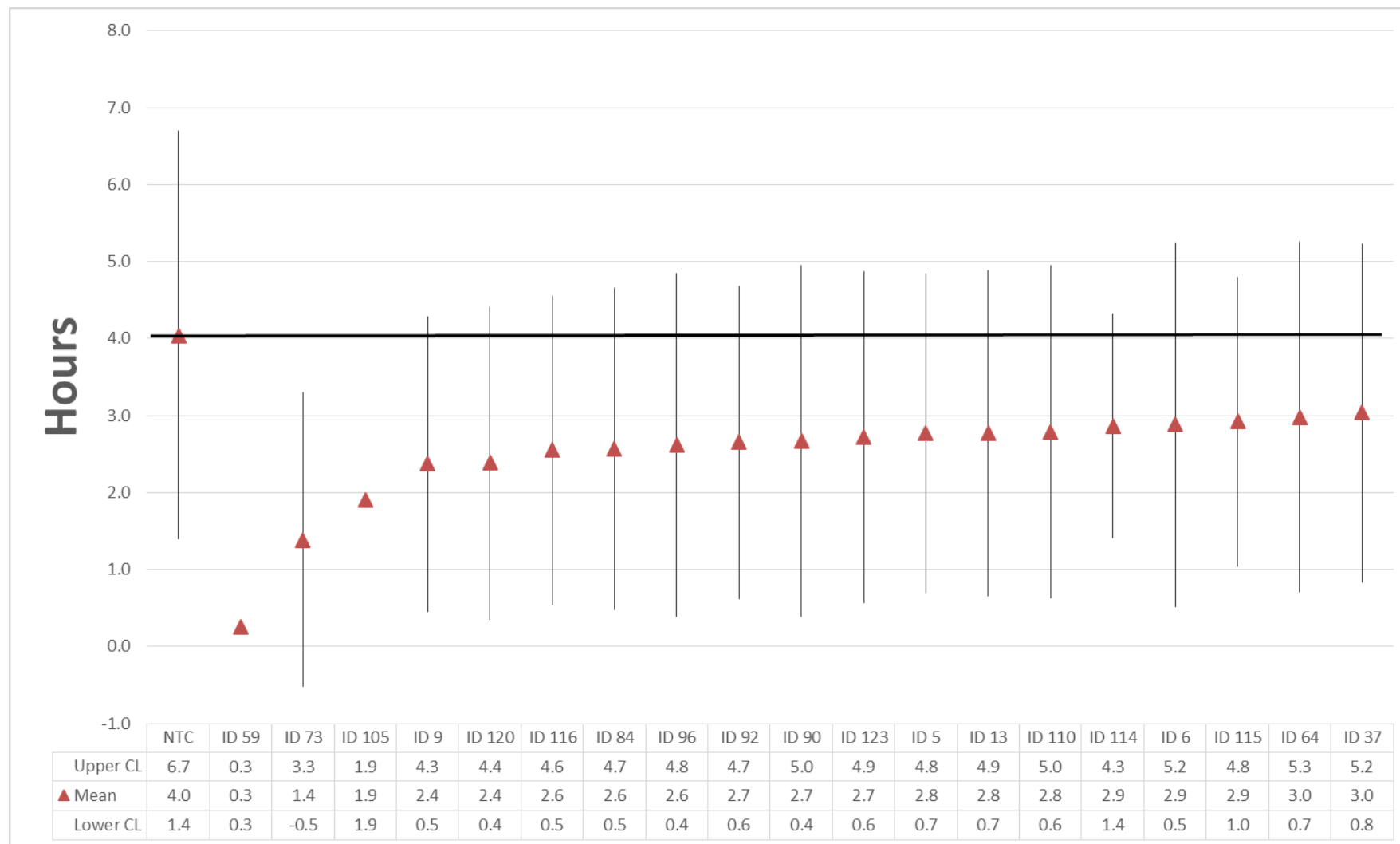
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

All Patients Non-Trauma Centers- Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

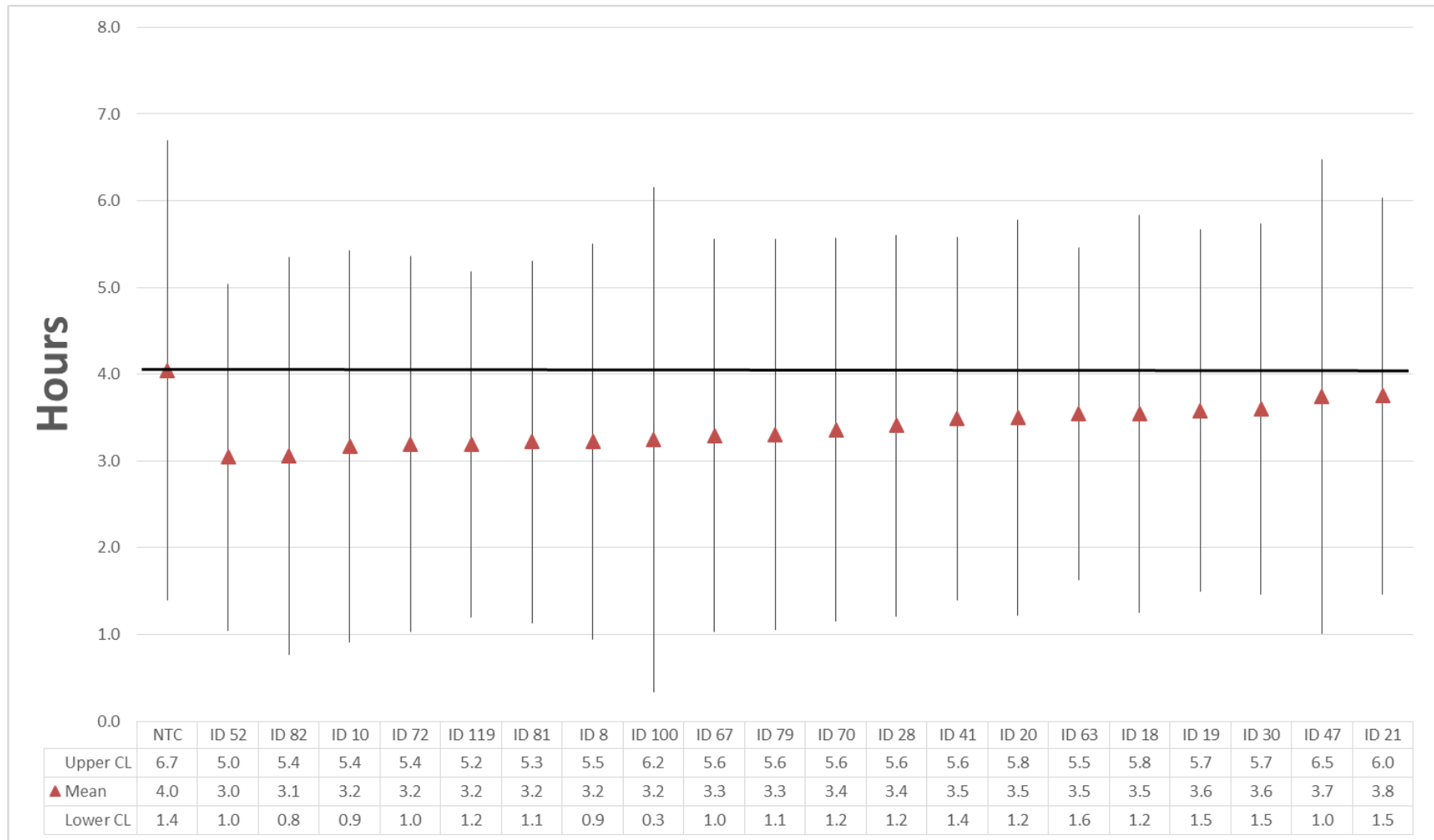
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

All Patients Non-Trauma Centers- Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

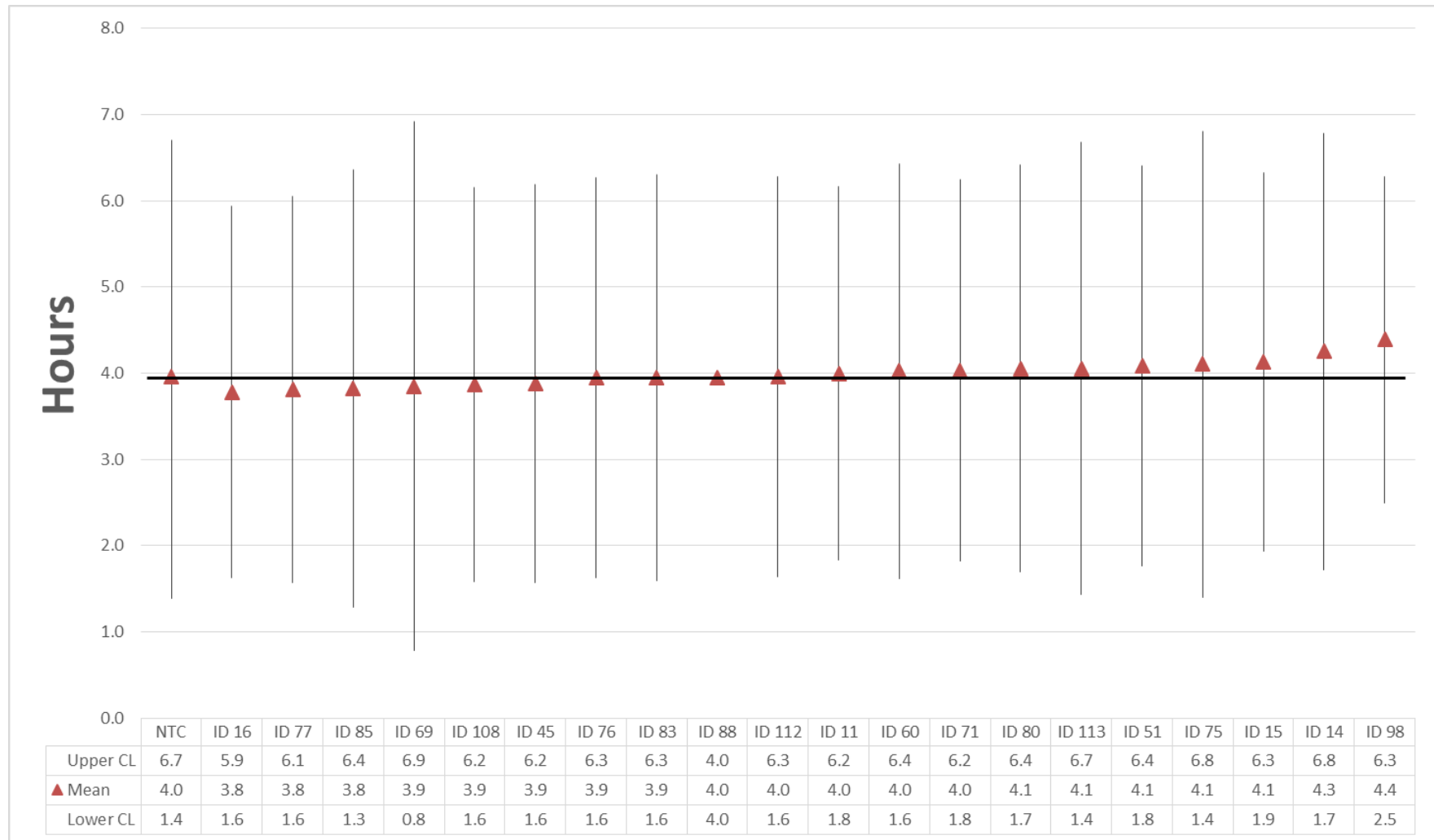
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

All Patients Non-Trauma Centers- Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

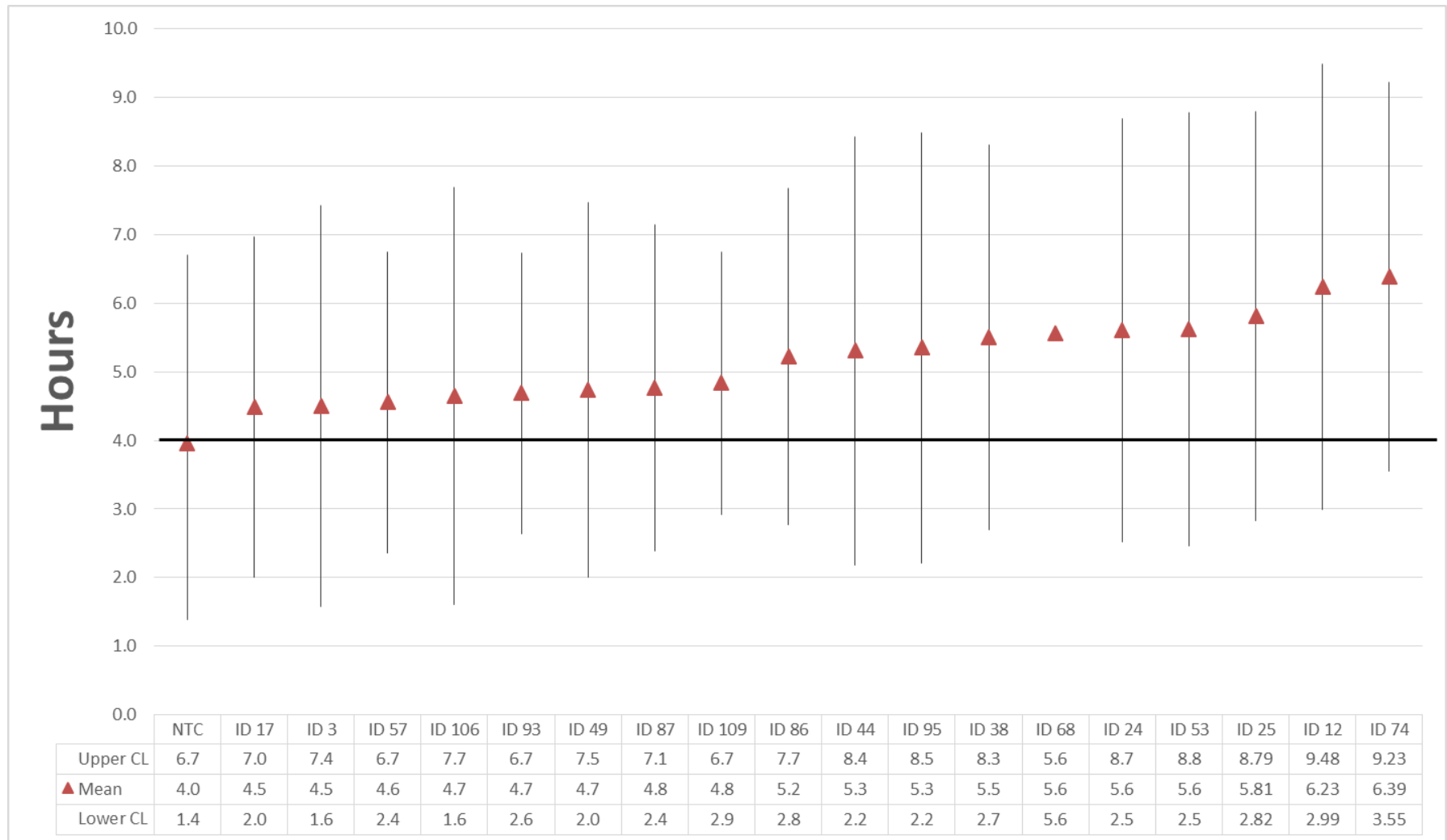
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

All Patients Non-Trauma Centers- Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

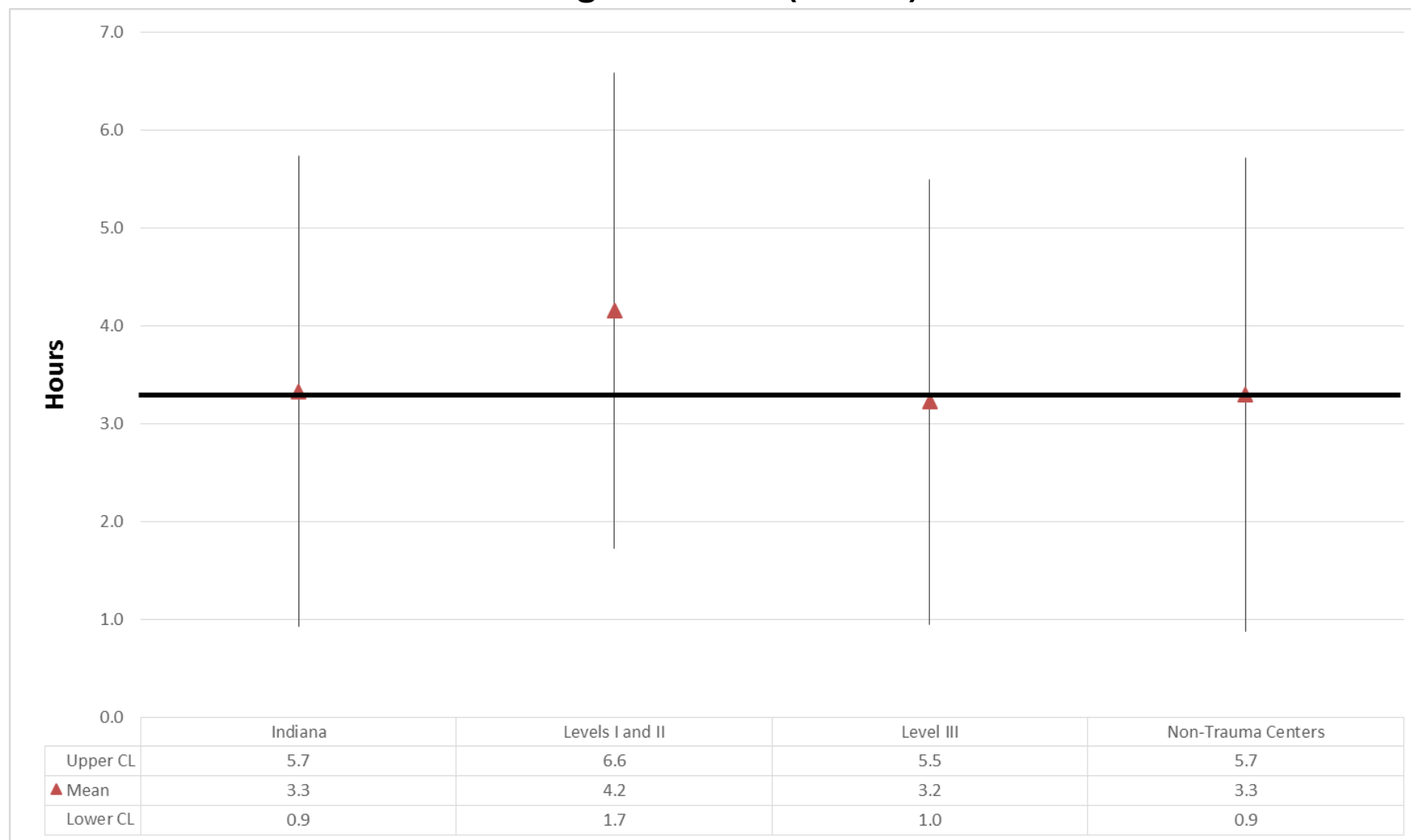
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition = Transferred

Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

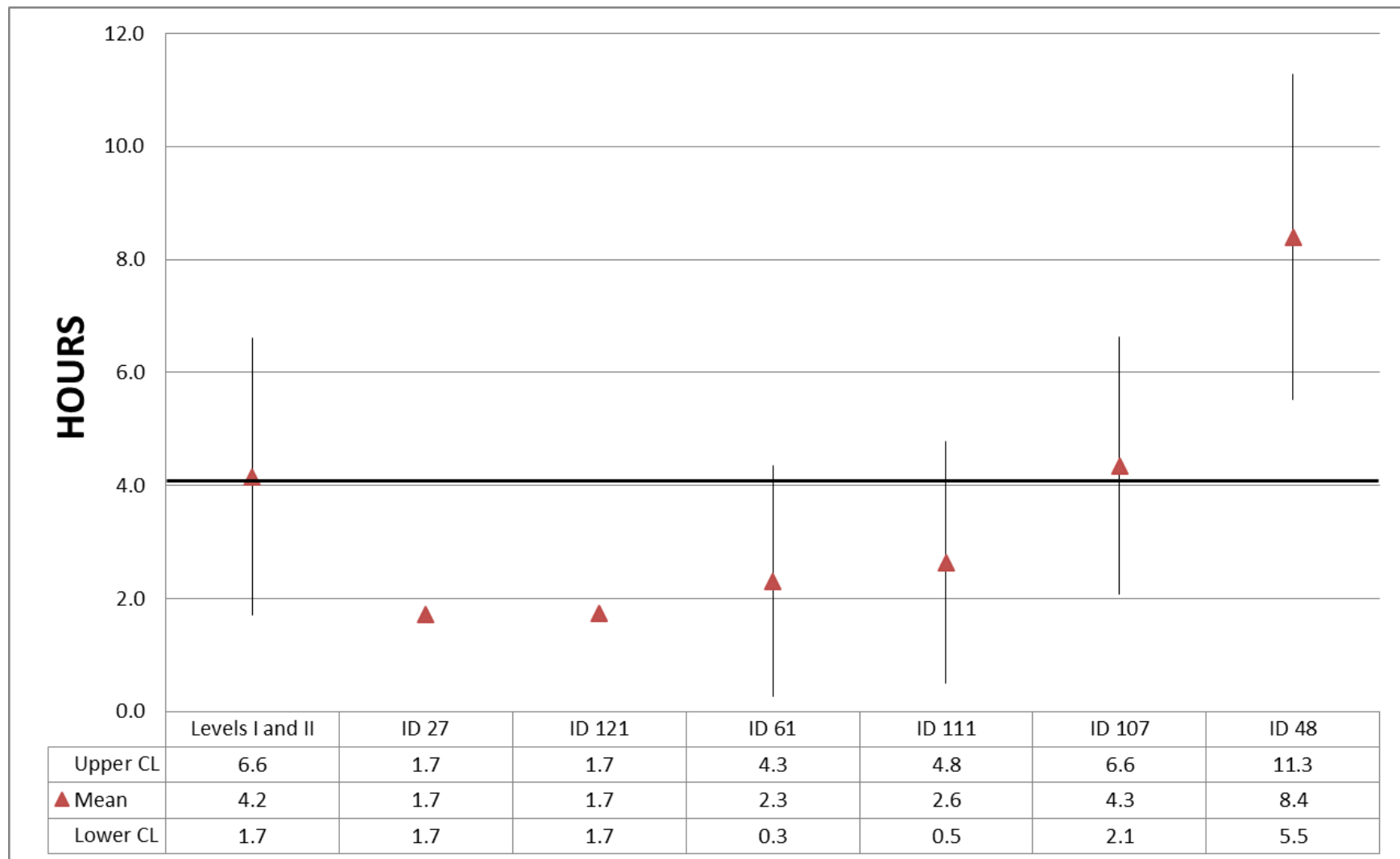
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition = Transferred

Level I and II Trauma Centers- Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

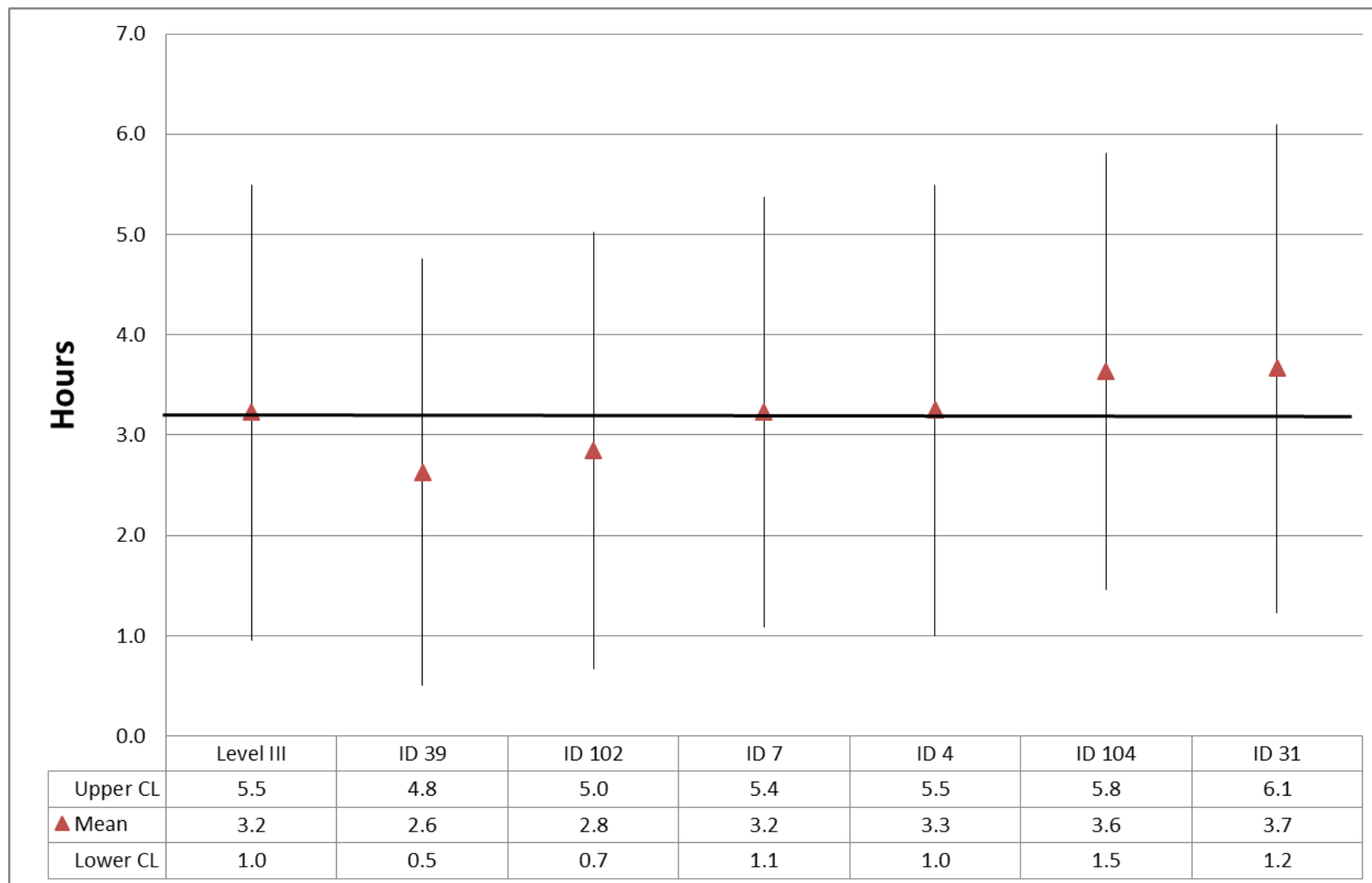
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition = Transferred

Level III Trauma Centers- Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

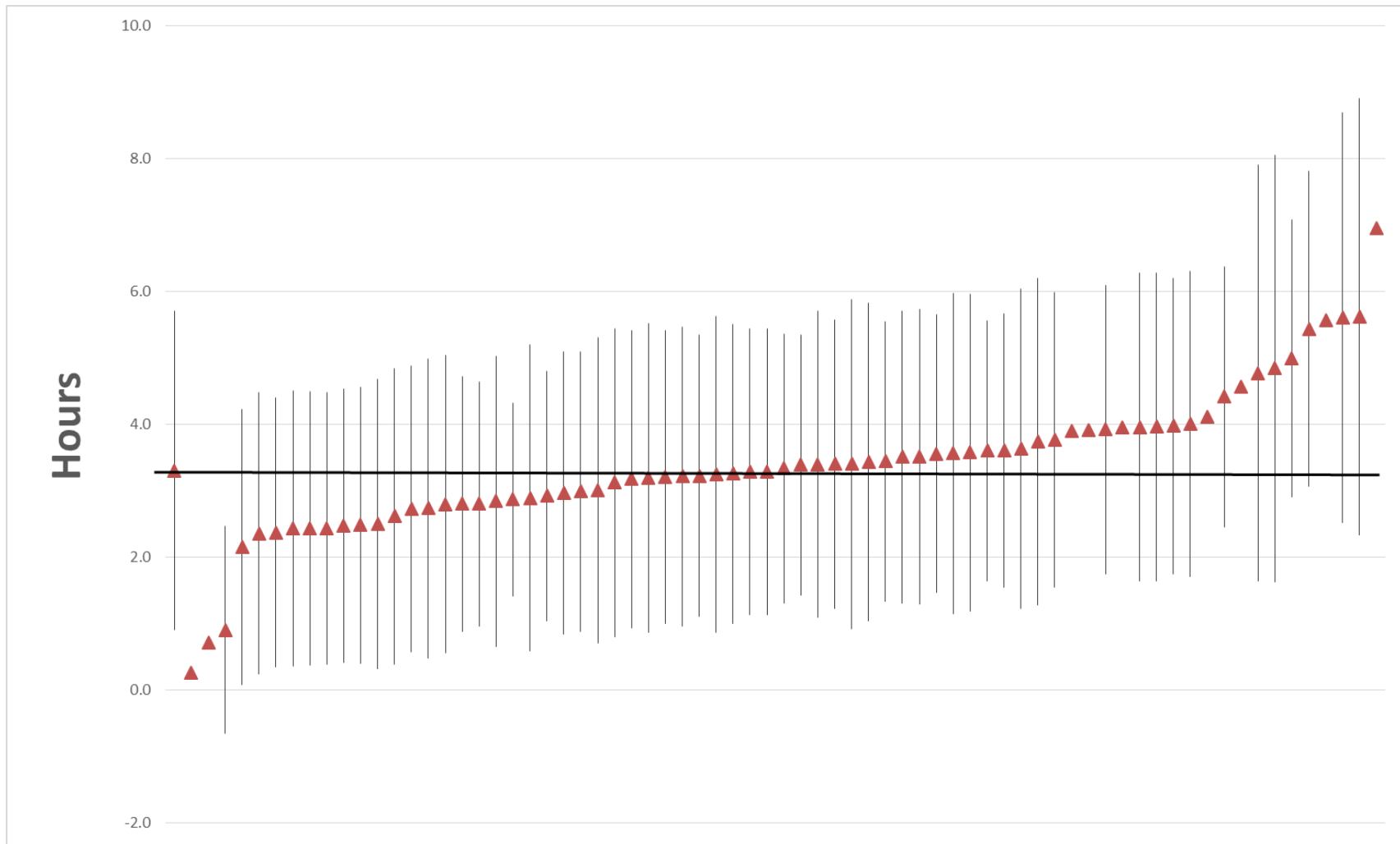
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition = Transferred
Non-Trauma Centers-
Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

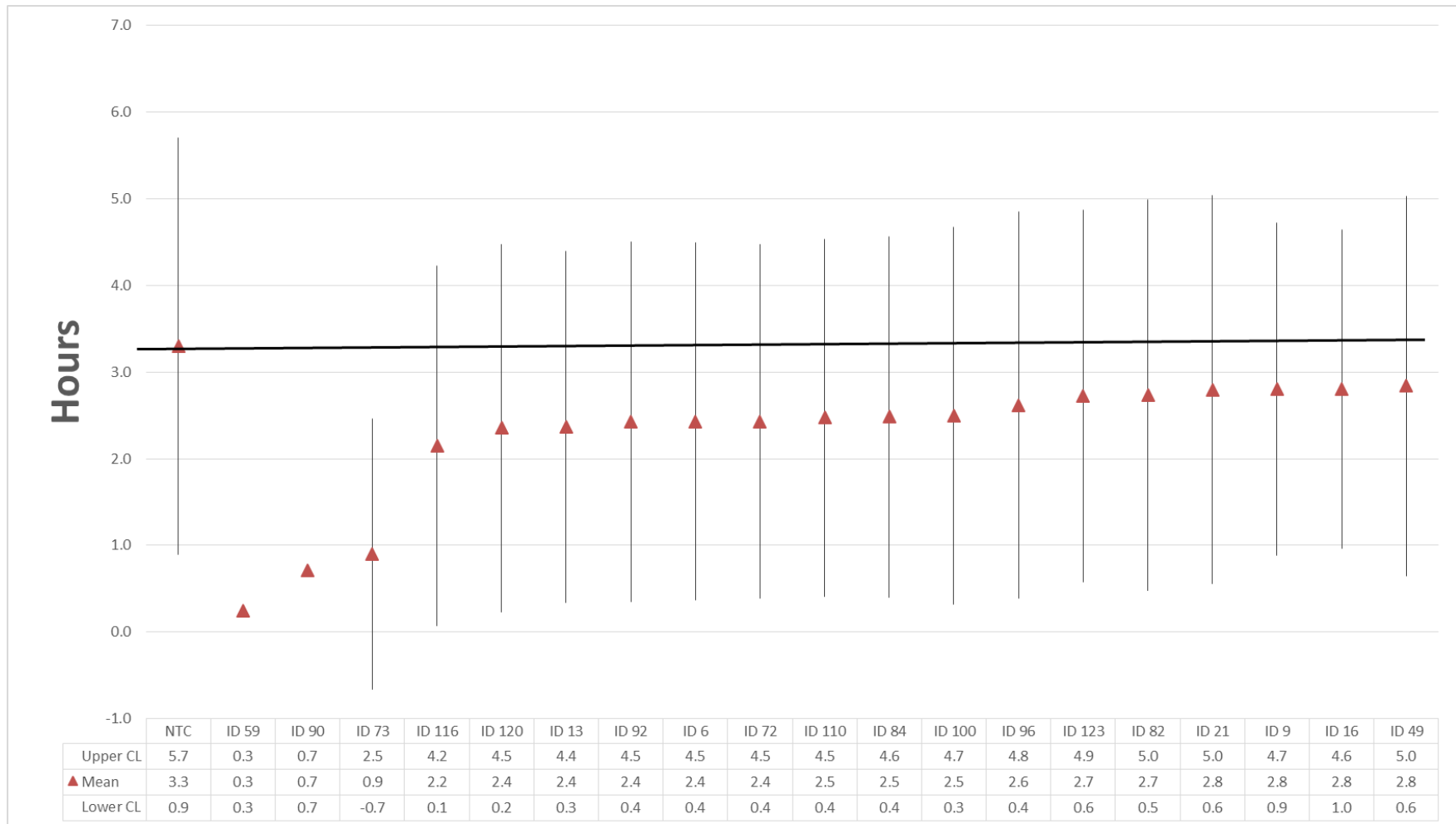
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition = Transferred Non-Trauma Centers- Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

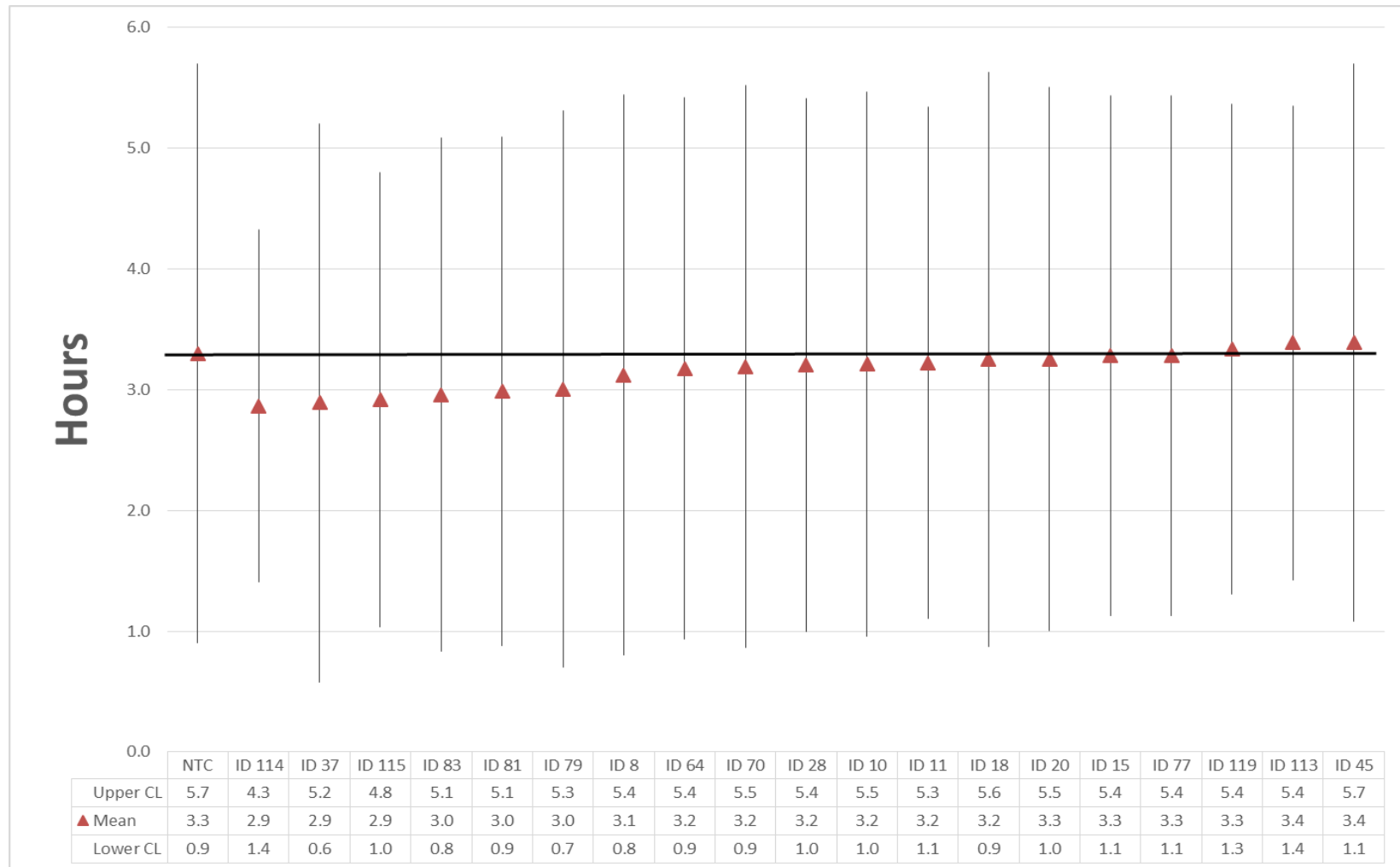
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition = Transferred Non-Trauma Centers- Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

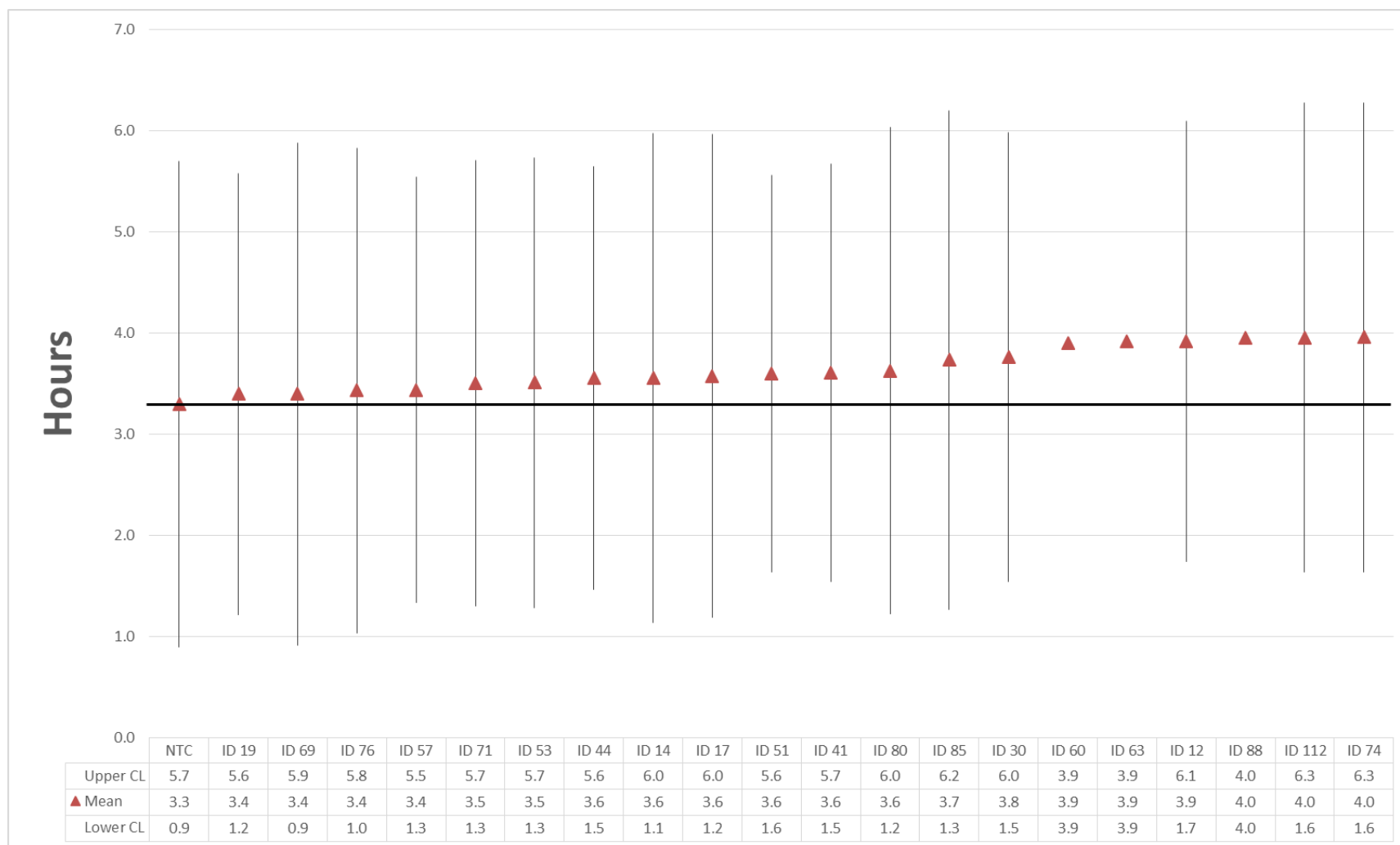
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition = Transferred
Non-Trauma Centers-
Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

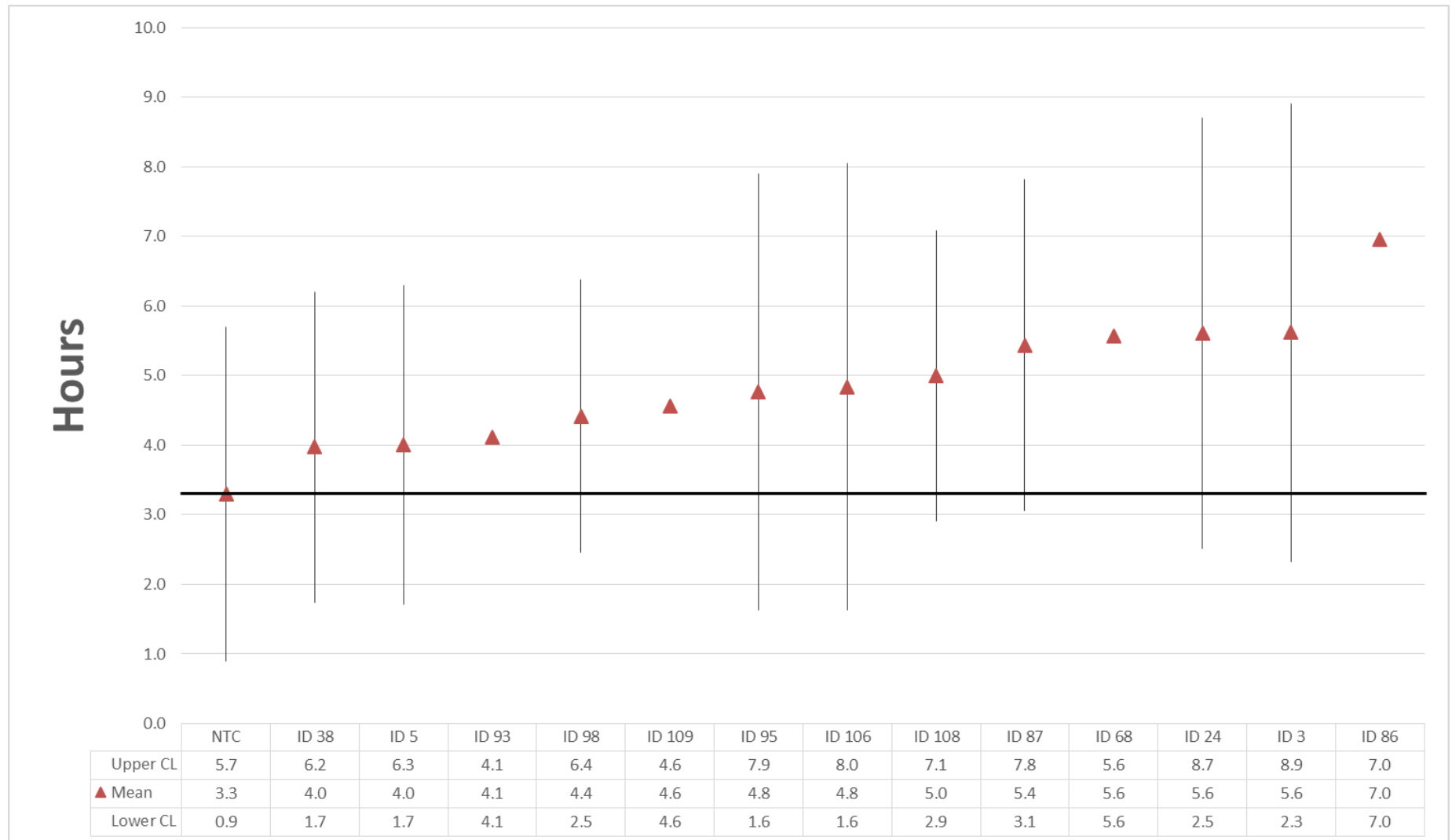
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition = Transferred

Non-Trauma Centers - Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

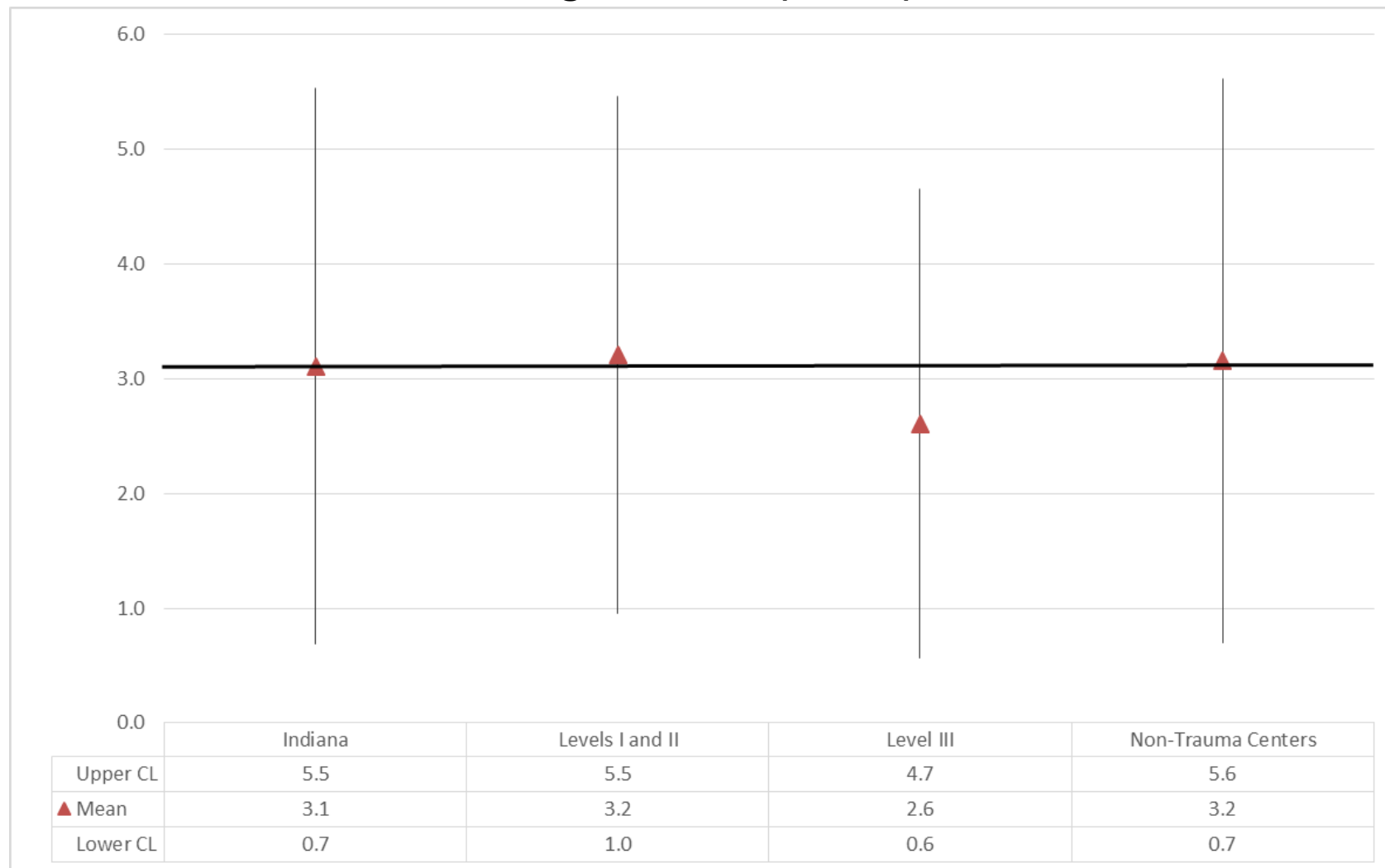
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

Critical Patients, ED Disposition = Transferred

Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

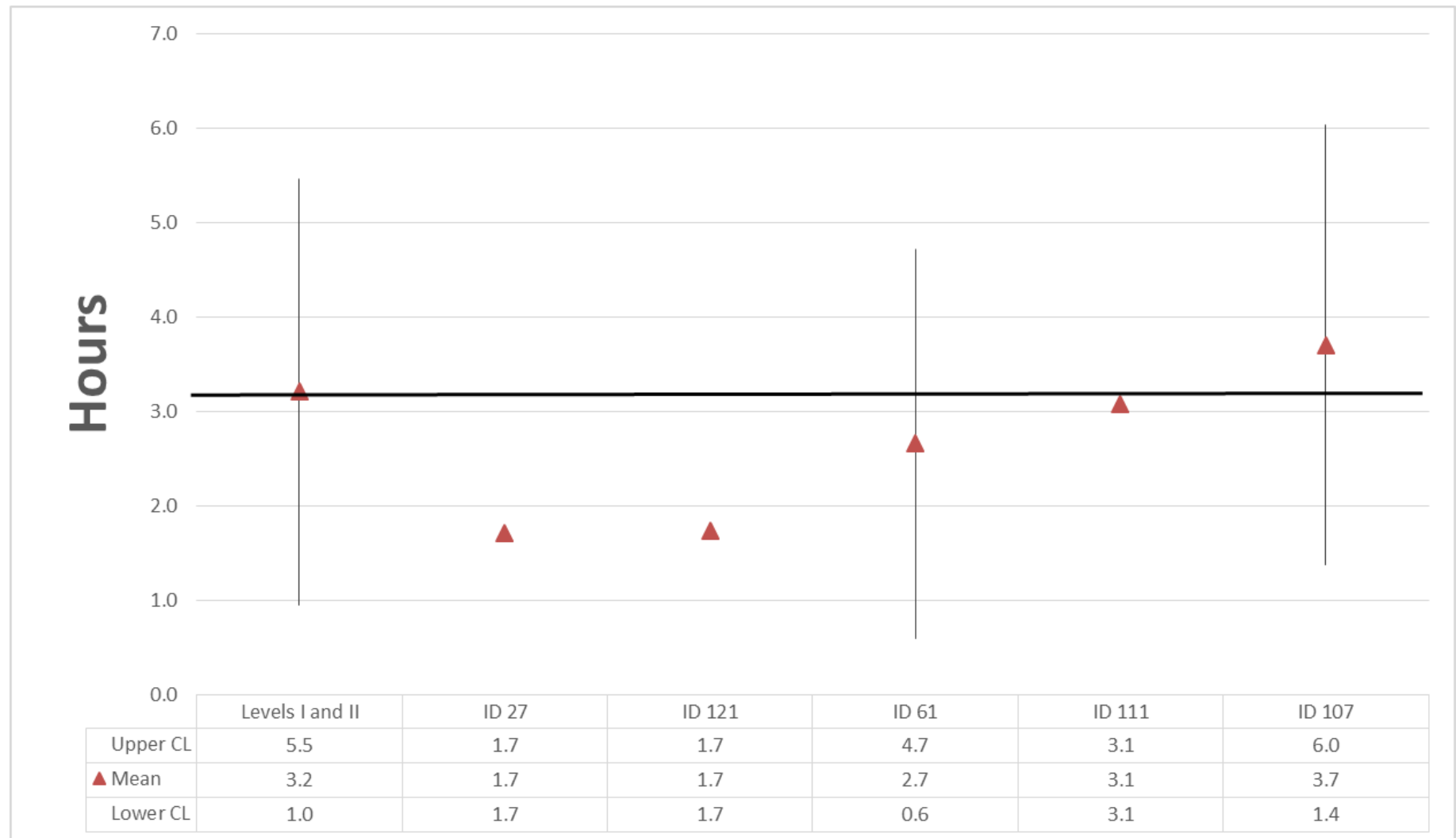
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

Critical Patients, ED Disposition = Transferred

Level I and II Trauma Centers - Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

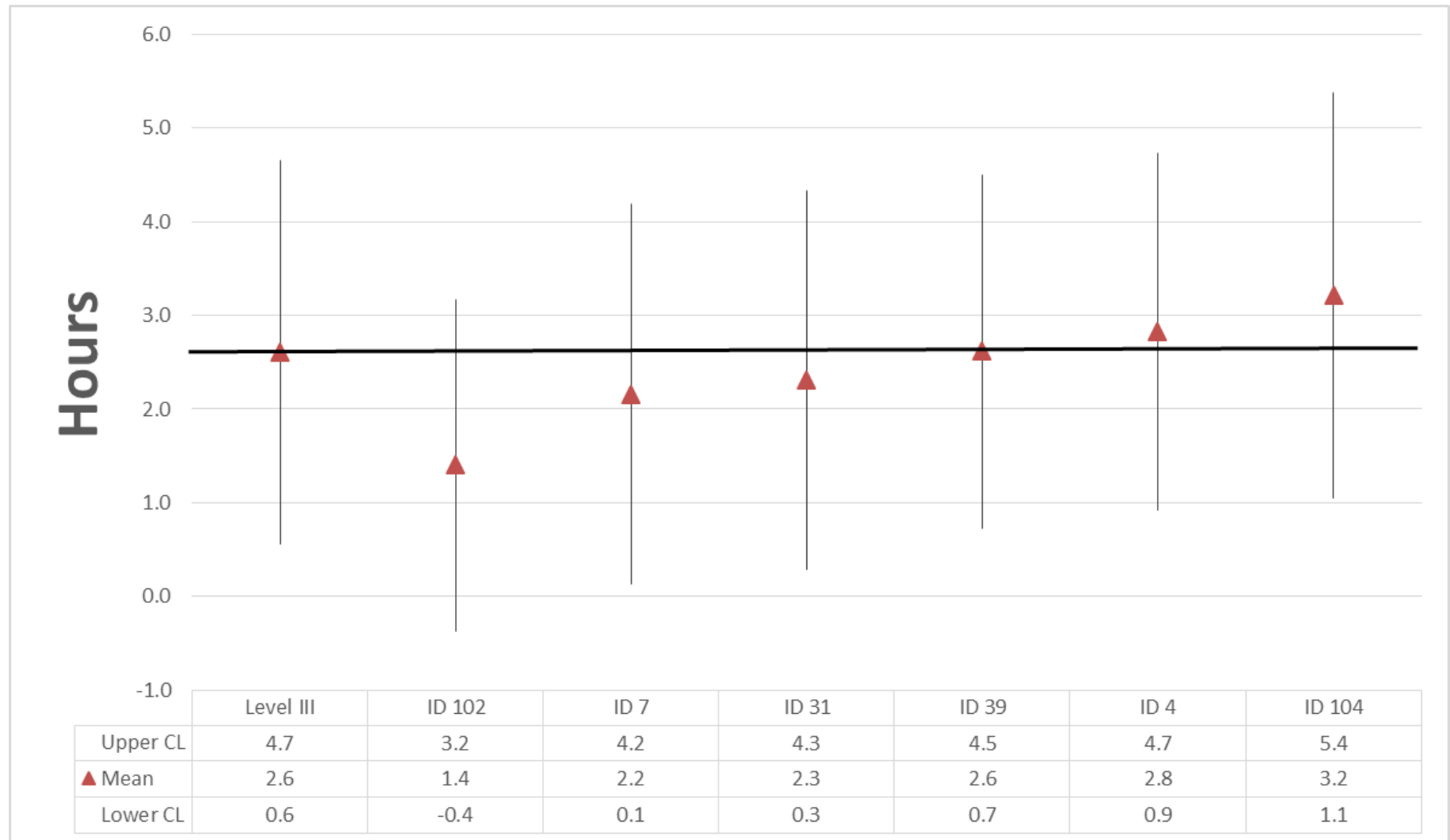
Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

Critical Patients, ED Disposition = Transferred

Level III Trauma Centers - Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

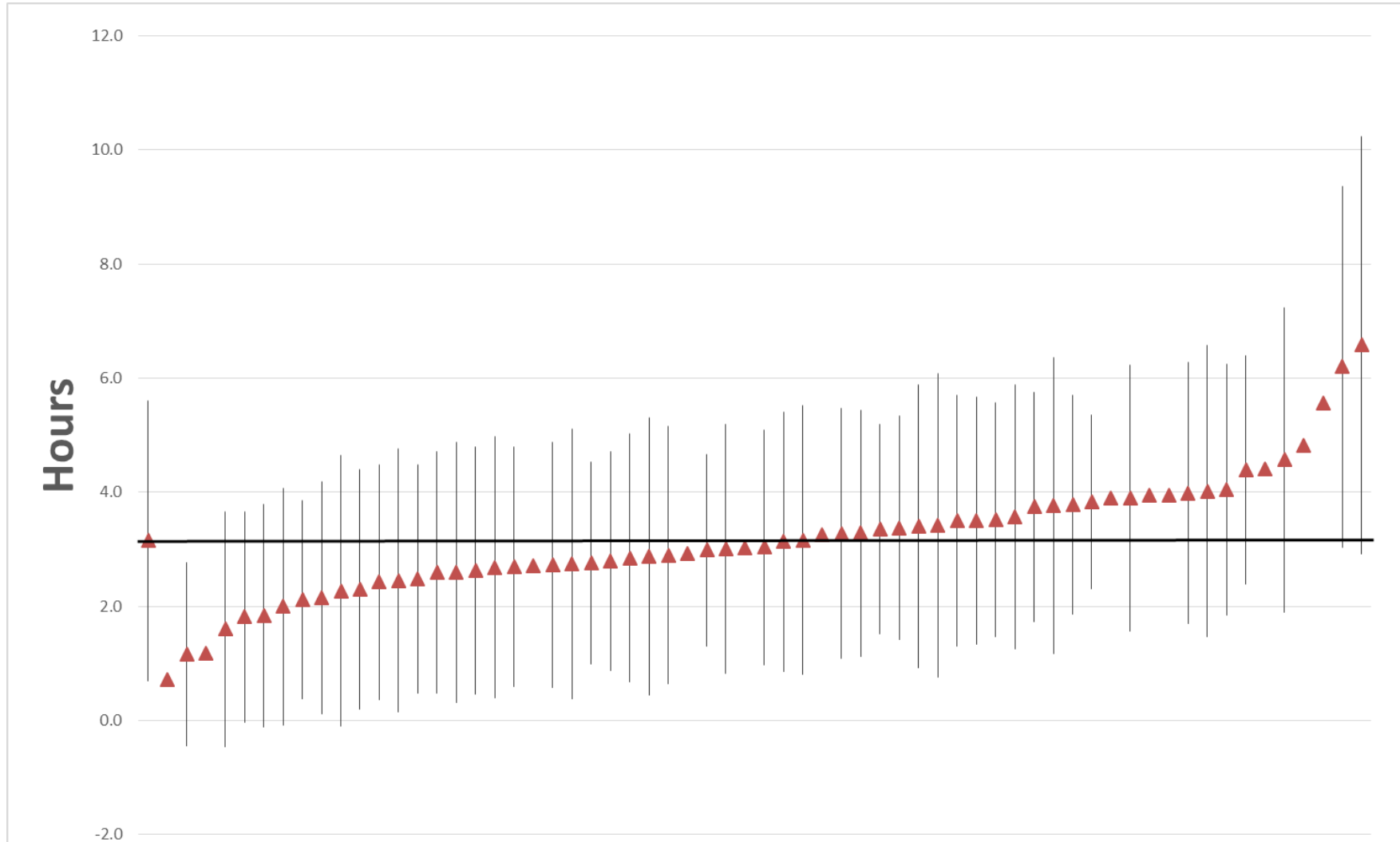
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

Critical Patients, ED Disposition = Transferred
Non-Trauma Centers - Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

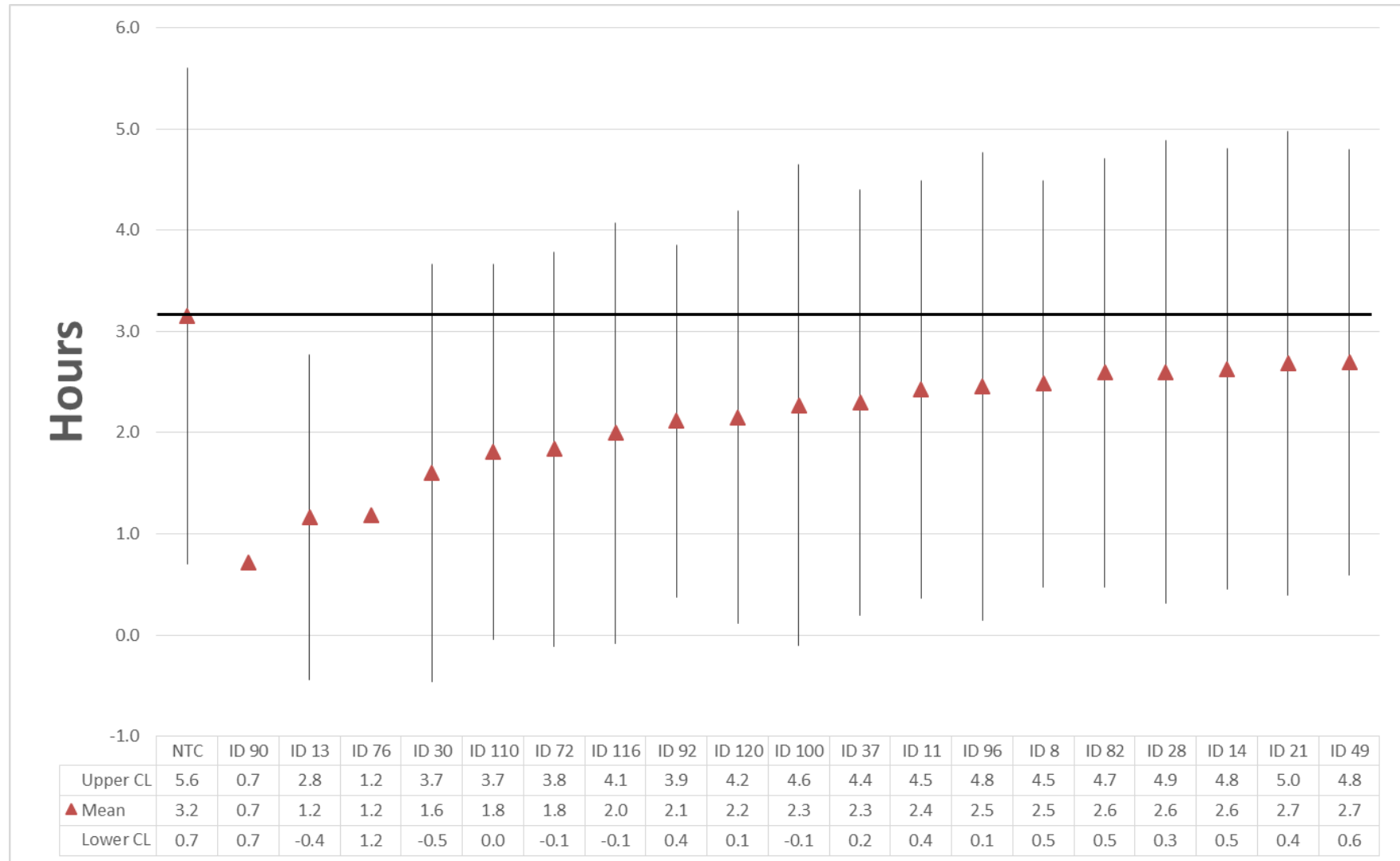
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

Critical Patients, ED Disposition = Transferred Non-Trauma Centers - Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

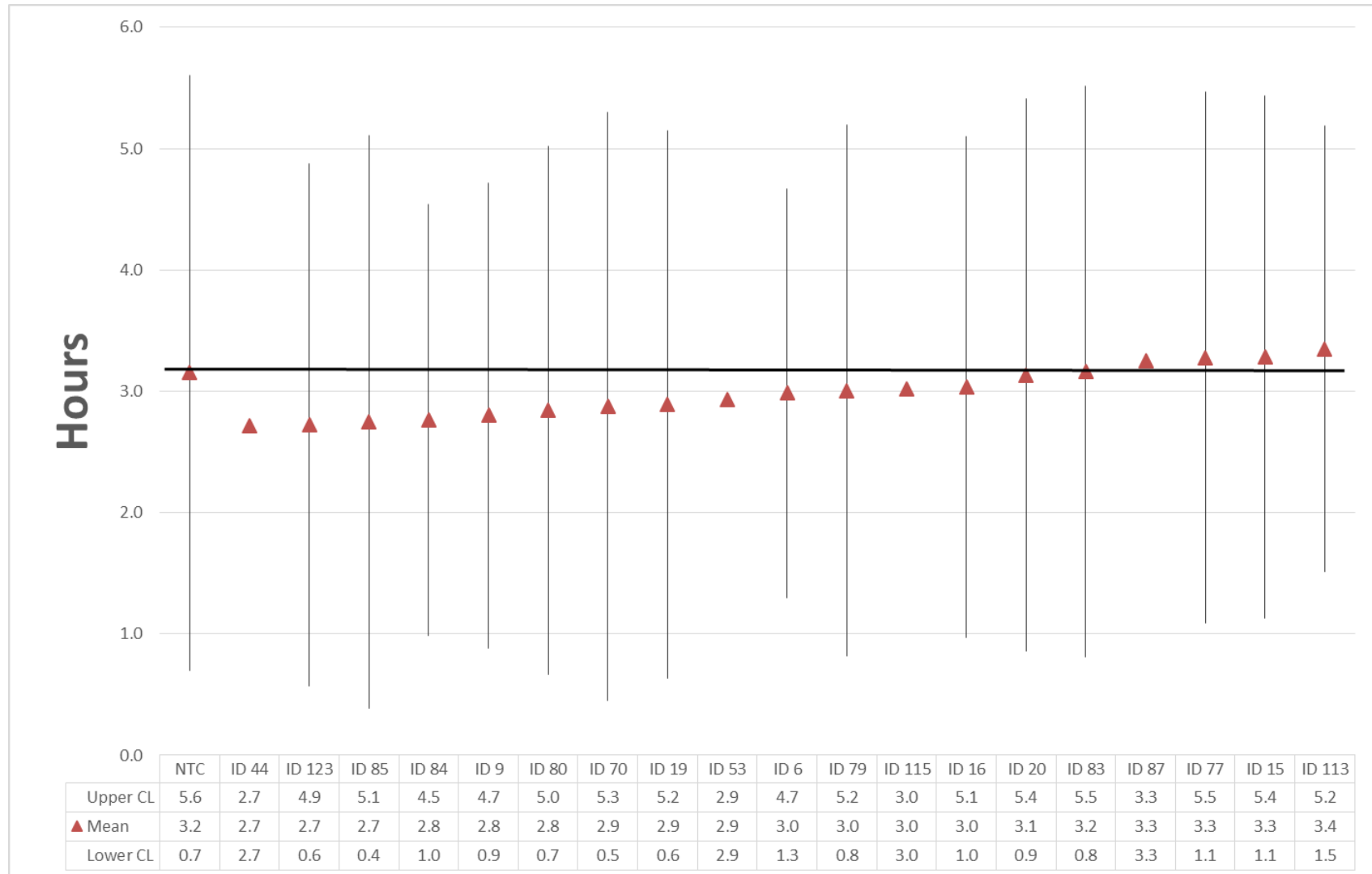
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

Critical Patients, ED Disposition = Transferred Non-Trauma Centers - Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

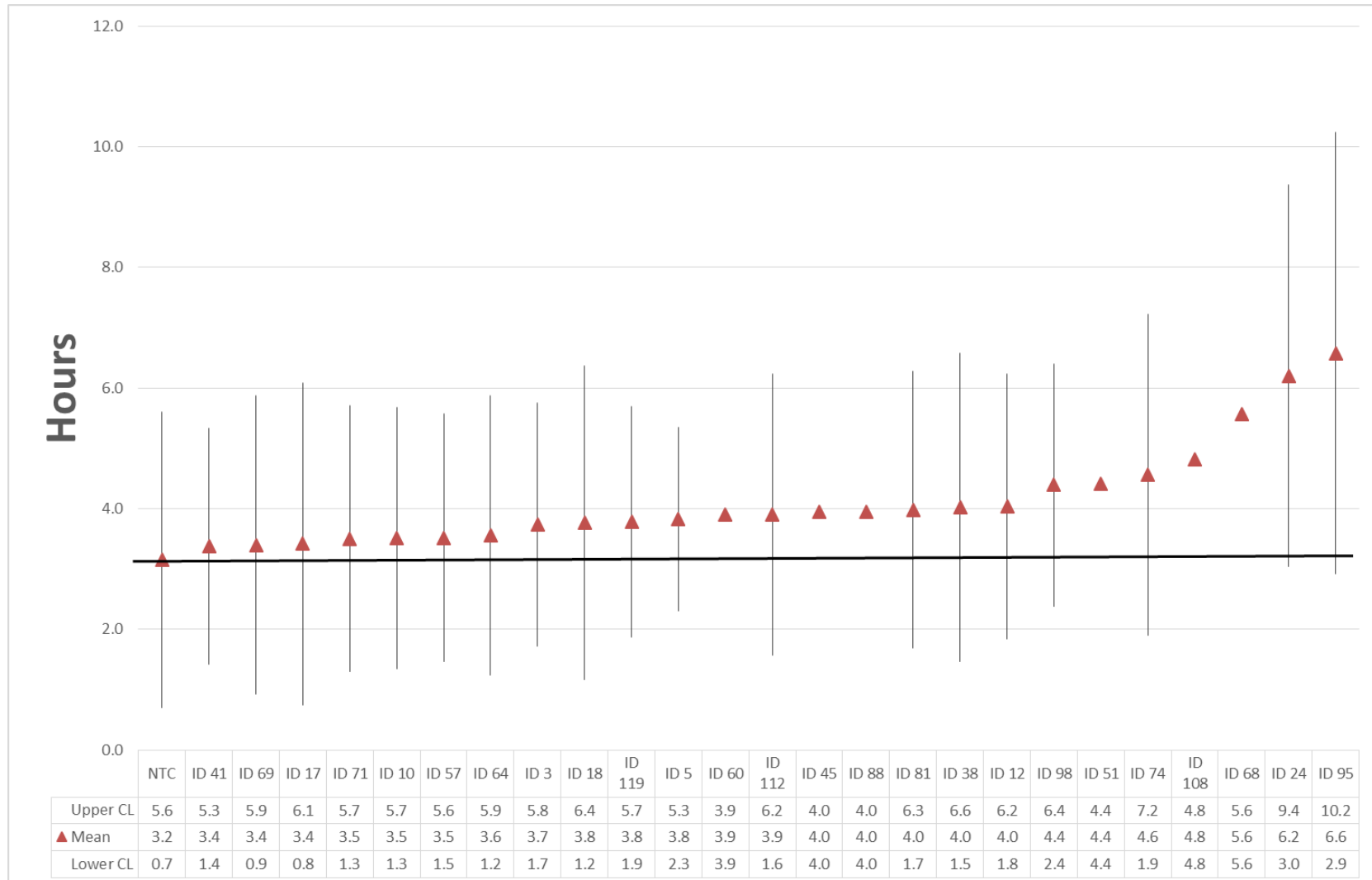
96 Total Hospitals Reporting

Level I and II: 9 facilities 45.8% of data

Level III: 7 facilities 10.2% of data

(Non-Trauma) Hospitals: 80 facilities 44.0% of data

Critical Patients, ED Disposition = Transferred Non-Trauma Centers - Average ED LOS (Hours)



Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

ED Length of Stay

ED Length of Stay (minutes)				
	Indiana Average	Level I and II	Level III	NTC
N=	8054	3787	771	3496
Average	246.1	252.9	229.0	242.7
Std. Deviation	192.9	205.3	135.5	189.6
Minimum	0	1	2	0
Quartile 1	142	131	150	150
Median	207	205	207	208.5
Quartile 3	296	311	288	288
Maximum	2280	1829	1970	2280

ED Disposition

ED Disposition (count)				
	Indiana	Level I and II	Level III	NTC
Floor Bed	3918	1732	427	1759
ICU	1092	854	76	162
Transferred	1425	65	167	1193
OR	656	441	67	148
Home w/o Services	282	146	18	118
Observation	409	249	43	117
Step-Down	473	248	42	183
Expired	68	31	14	23
AMA	7	7	0	0
Home W/ Services	5	1	0	4
Other	18	8	4	5
NK/NR/NA	375	218	33	124

*A bar graph of ED Disposition is found on page 2.

*A bar graph of ED Length of Stay is found on page 2.

Indiana Trauma Registry

Statewide Quarter 4 Data Report
October 1, 2015—December 31, 2015
8,728 Incidents

96 Total Hospitals Reporting
 Level I and II: 9 facilities 45.8% of data
 Level III: 7 facilities 10.2% of data
 (Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Length of Stay by ISS

ED Length of Stay (minutes)								
ISS Category	Indiana Average	Indiana Average	Level I and II	Level I and II	Level III	Level III	Non-Trauma Centers	Non-Trauma Centers
	Counts	Minutes	Counts	Minutes	Counts	Minutes	Counts	Minutes
1-8	3773	256.8	1639	270.1	378	227.7	1756	250.6
9-15	3033	248.6	1394	256.6	323	234.7	1316	243.5
16-24	591	226.4	455	230.4	45	235.7	91	201.8
25-44	330	177	269	178.8	20	170.5	41	168.5
45-74	23	149.6	18	144.9	4	149	1	237.0
75	11	122.2	11	122.2	0	-	0	-
No ISS	292	214.3	1	188	1	14	290	215

*A Box and Whisker plot of ED Length of Stay by ISS is found on page 5.

Indiana Trauma Registry

Statewide Quarter 4 Data Report
October 1, 2015—December 31, 2015
8,728 Incidents

96 Total Hospitals Reporting
 Level I and II: 9 facilities 45.8% of data
 Level III: 7 facilities 10.2% of data
 (Non-Trauma) Hospitals: 80 facilities 44.0% of data

ED Disposition (count) by ISS Category

	Floor Bed	ICU	Transferred	OR	Observation	NK/NR/ NA	Step- Down	Home w/o Services	Expired	Other	AMA	Home w/ Services	Total
1-8	1852	279	755	286	293	148	200	223	17	8	7	4	4072
9-15	1770	362	468	211	83	179	199	20	18	7	0	1	3318
16-24	126	244	88	67	21	12	50	1	8	0	0	0	617
25-44	19	182	29	73	0	14	17	1	15	1	0	0	351
45-74	0	12	1	9	0	0	0	0	1	0	0	0	23
75	1	4	0	2	0	0	0	0	4	0	0	0	11
NO ISS	150	9	84	8	12	22	7	37	5	2	0	0	336
Total	3918	1092	1425	656	409	375	473	282	68	18	7	5	8728

*Bar graph of ED Disposition by ISS is found on page 25.

Indiana State Department of Health

Indiana Trauma Registry

Hospitals Reporting Trauma Data Quarter 4
October 1, 2015 - December 31, 2015

I II Level I and II Trauma Centers

Deaconess Hospital
Eskenazi Health
IU Health - Methodist Hospital
Lutheran Hospital of Indiana
Memorial Hospital of South Bend
Parkview Regional Medical Center
Riley Hospital for Children at IU Health
St Mary's Medical Center of Evansville
St Vincent Indianapolis Hospital & Health Services
Terre Haute Regional Hospital

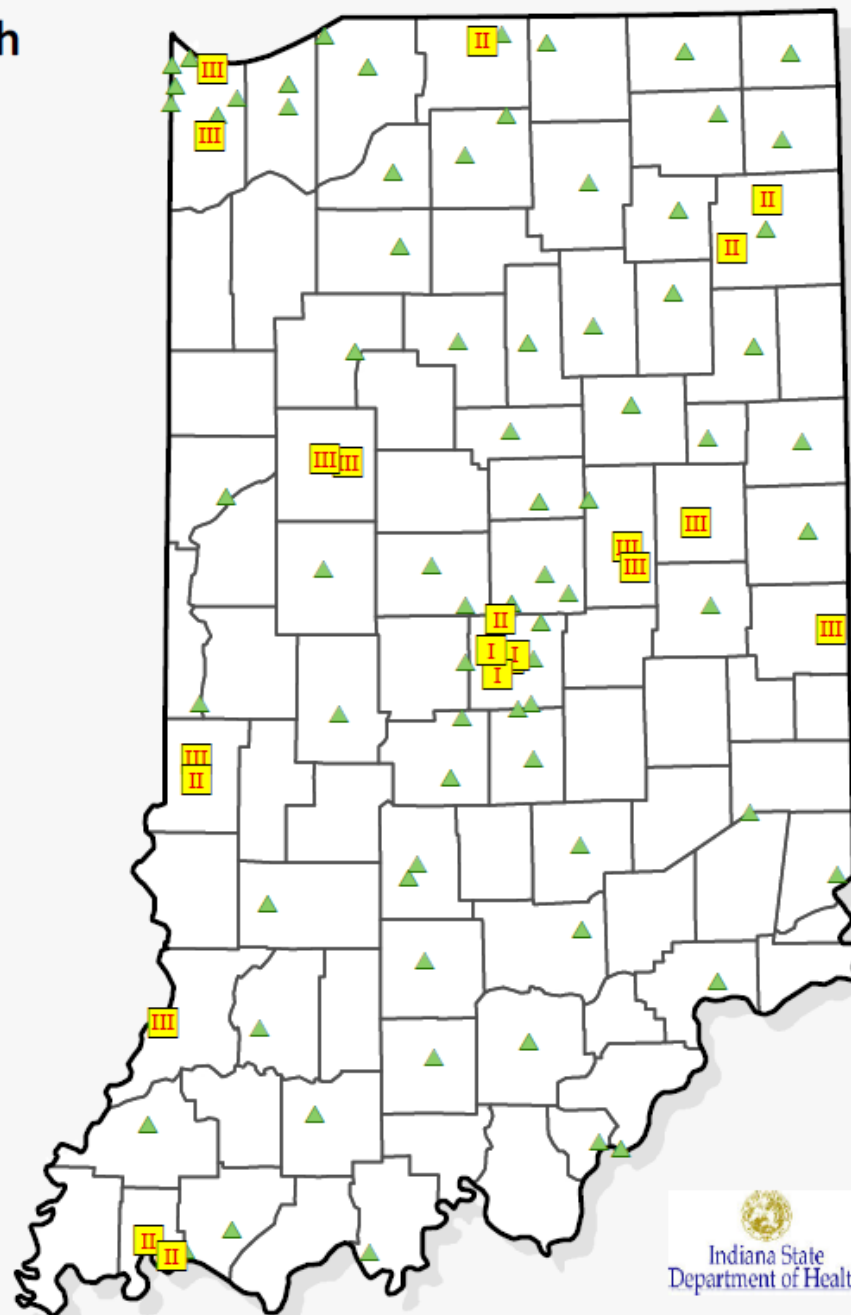
III Level III Trauma Centers

Community Hospital of Anderson & Madison Co.
Franciscan St Anthony Health - Crown Point
Franciscan St Elizabeth Health - Lafayette East
Good Samaritan Hospital
IU Health - Arnett Hospital
IU Health - Ball Memorial Hospital
Methodist Hospitals - Northlake Campus
Reid Hospital & Health Care Services
St Vincent Anderson Regional Hospital
Union Hospital (Terre Haute)

▲ Non-Trauma Hospitals

76 Non-Trauma Hospitals

Hospital categories include Verified and "In the Process" Trauma Centers



Map Author: ISDH Trauma & Injury Prevention, ISDH PHG - June, 2016

Indiana Trauma Registry

Statewide Quarter 4 Data Report

October 1, 2015—December 31, 2015

8,728 Incidents

96 Total Hospitals Reporting

Level I and II:	9 facilities	45.8% of data
Level III:	7 facilities	10.2% of data
(Non-Trauma) Hospitals:	80 facilities	44.0% of data

General Report:

- The caterpillar plots with the anonymous ID's for all patients per hospital may be found on pages 33-40.
- The caterpillar plots with the anonymous ID's for transferred patients per hospital may be found on pages 41-48.
- The caterpillar plots with the anonymous ID's for critical transferred patients per hospital may be found on pages 49-55.
- Reference tables now accompany the graphs for demographic data on pages 29-32 and 56-58.